

uebor

Utah Economic and Business Review

Volume 59
Numbers 1 and 2
January/February
1999

DEBR

David Eccles School
of Business
Bureau of Economic and
Business Research
University of Utah

1998 POPULATION ESTIMATES FOR UTAH

*Peter Donner, Economist
Natalie Gochnour, Manager
Demographic and Economic Analysis
Governor's Office of Planning and Budget*

Utah's population increased 1.7 percent during 1998, from 2,048,753 to 2,083,238, according to the Utah Population Estimates Committee (UPEC). The population growth of 34,485 resulted from 44,126 births less 11,648 deaths, plus net-migration of 2,007. Utah's population continues to rank 34th in the nation, though the state's growth rate during 1998 was much higher than the national rate of 1.0 percent. The U.S. Bureau of the Census estimates that Utah was the fourth fastest growing state in the nation during 1998. Utah's population growth is characterized by a high birth rate and low death rate.

This article presents the UPEC estimates of population for the state, multi-county districts (MCDs) and Utah's 29 counties and discusses the methods used to develop the estimates. The 1998 estimates and the historical context of Utah's population growth are discussed. Details are provided on the components of population change, as well as calculations of crude birth and death rates and population density. The final section describes the estimates prepared and the methods used by the U.S. Bureau of the Census.

1998 Estimates

As Table 1 and Figure 1 show, Utah has now experienced eight consecutive years of net in-migration. The 1998 level of 2,007 more people moving into the state than out is down significantly from the record 22,831 observed during 1994. During the past eight years, the number of people moving into the state is estimated to exceed the number moving out by almost 125,000. Even with this large net in-migration, more than 60 percent of Utah's population growth since 1990 has come from natural increase, which is the difference between births and deaths. Natural increase since 1990 totals almost 230,000, while total population growth has been over 350,000. The concepts of natural increase and net migration are discussed in more detail in the section on components of population change.

Utah's growth over the past year is composed of record numbers of both births (44,126), and deaths (11,648), but significantly lower net in-migration (2,007), than the past seven years. Less net in-migration is occurring because of a general moderation in economic activity locally and improving economic conditions in other states, particularly California. California is now in its fourth year of economic expansion, after a deep recession in the early part of this decade. The rate of job growth in California (3.1 percent), exceeded that of Utah (3.0 percent), during 1998.

Among Utah's 29 counties, the most rapid growth occurred in counties within or adjacent to the northern metropolitan counties and two counties in the southwest portion of the state. The populations of Juab, Tooele, Summit, Sanpete, Utah, Wasatch, and Morgan counties are expanding quite rapidly, with four of these ranking among the five fastest growing counties in the state. These counties are in close proximity to urban services, but still provide many of the desirable characteristics found in a more rural setting (Table 2).

Washington and Iron counties, located in southwest Utah with St. George and Cedar City as the respective largest cities, also experienced rapid growth in 1998. Both counties offer a diversity of educational, tourism, retirement and economic opportunities for local residents. Interestingly, the rate of population growth in Iron County exceeded that of Washington County in 1998, something that has not happened for at least 30 years. This reversal has occurred as Washington County's rate of population growth has decelerated fairly dramatically in the past two years, while Iron County's rate of growth has remained strong and steady. In fact, Washington County's population growth rate dropped below 4 percent in 1998 for the first time in 24 years.

Figure 2 pictures an interesting feature of Utah's population growth. The semi-rural counties surrounding the Wasatch Front urban area are growing faster than the urban core. Sanpete, Wasatch, Summit, Juab, and Tooele counties are all growing faster than the highly urbanized area along the Wasatch Front. Although Utah County was one of the fastest growing counties in 1998, much of this growth reflects the urbanization of previously semi-rural parts of the county. To a large extent, the growth in these counties on the urban periphery results from the expansion of the Wasatch Front urban area. While these peripheral areas will retain their rural character for the foreseeable future, growth will be increasingly tied to the urban core.

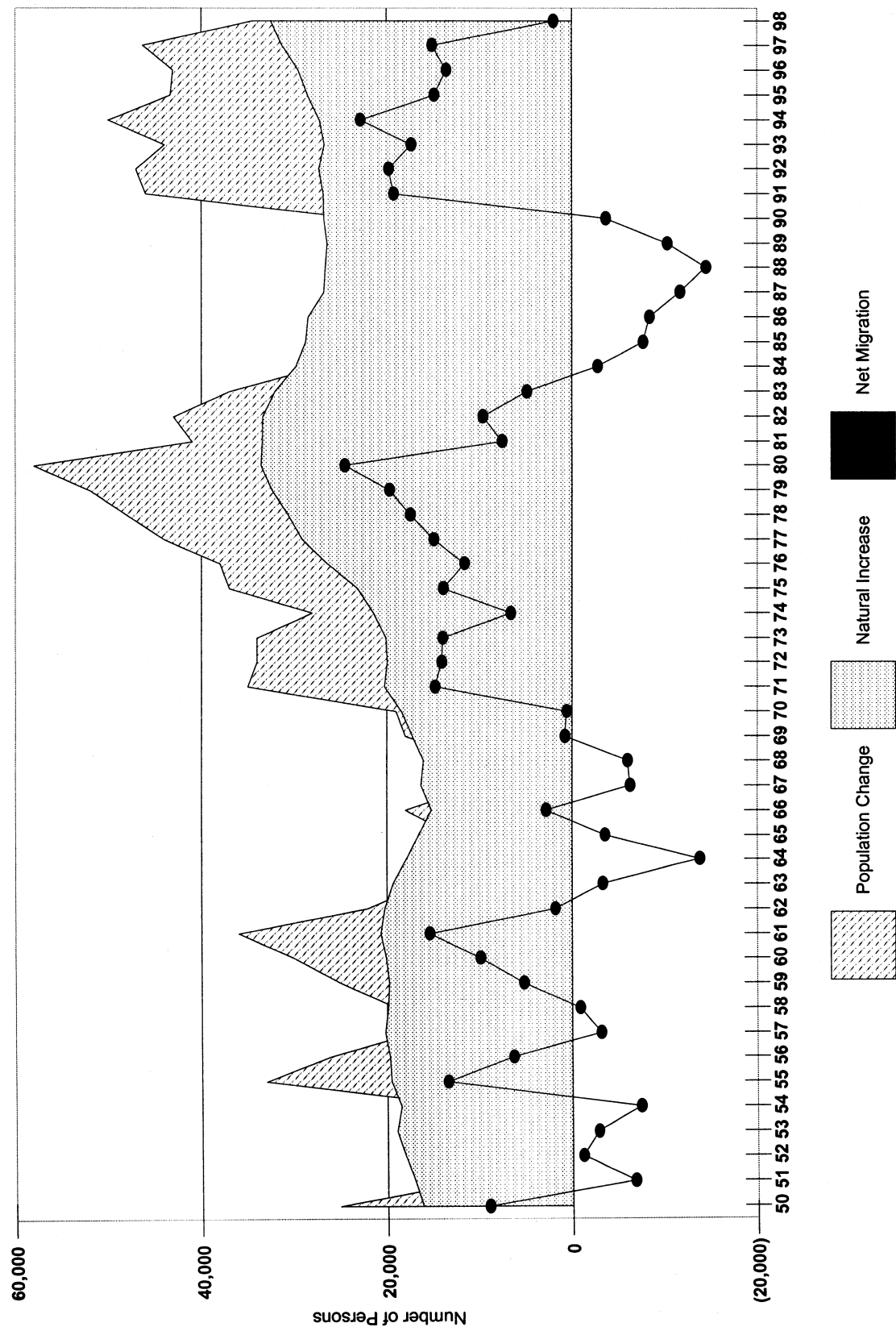
The relationship between job growth and population growth during 1998 is a reversion to more normal patterns than experienced in recent years. From 1993 to 1996, the job growth rate was more than twice the population growth rate, and the level of job growth was greater than population growth. Furthermore, the number of jobs created was about 20 percent greater than the population increase. Part of the disparity resulted because temporary workers not residing in Utah are not counted in the population. Two other sources of the disparity include an increasing portion of the population working and an increasing portion of workers holding more than one job. Additionally, the unemployment rate fell from 5.0 percent in 1992 to 3.1 percent in 1997. Changing household composition, particularly relatively fewer two-parent households with children, also contributed to the unusual relationship between population growth and job growth observed during the mid-1990s.

Historical Context

Utah's population reached 1 million during 1966 and 2 million during 1996, 30 years later. Table 3 presents the UPEC population estimates for the state, the MCDs, and the counties since 1940 for selected years. During this period, the state's fastest growth occurred during the 1970s, when the population increased at a 3.3 percent average annual rate. During the 1940s and 1950s, the state's population increased about 2.5 percent per year, which contrasts with the 1960s and 1980s, when the population increased less than 2.0 percent per year. The growth rate for the period 1990-1998, 2.5 percent per year, represented a return to the relatively high rates of growth seen during the 1940s and 1950s, but still substantially below the growth of the 1970s. The 1.7 percent rate of annual increase in 1998 represents a deceleration in the rate of growth of the state's population. It is, in fact, the slowest annual growth rate since 1990.

Reflecting the fact that it has almost half of Utah's population, Salt Lake County's growth pattern most closely mirrors the state's. As with the state as a whole, Salt Lake County experienced fairly rapid growth during the 1940s (2.7 percent per year), even more rapid growth during the 1950s (3.3 percent per year), and a slowdown in the 1960s (1.8 percent per year). Rapid growth resumed during the 1970s (3.1 percent per year), then another slowdown in the 1980s (1.5 percent per year). For the 1990 through 1995 interval, the average annual percentage growth rate for Salt Lake County was 2.1 percent. However,

Figure 1
Net Migration and Natural Increase
1950-1998



Source: Utah Population Estimates Committee.

Table 1
Utah Population Estimates and Components of Population Change: 1940 to 1998

Year	July 1st Population	Percent Change	Population Change	Net Migration	Net Migration as a Percent of Previous Year's Population	Natural Increase	Fiscal Year Births	Fiscal Year Deaths
1940	551,800					8,419	13,038	4,619
1941	551,000	-0.1	-800	-9,631	-1.7	8,831	13,293	4,462
1942	571,200	3.5	20,200	10,231	1.9	9,969	14,357	4,388
1943	640,000	10.8	68,800	57,284	10.0	11,516	16,182	4,666
1944	604,700	-5.8	-35,300	-47,122	-7.4	11,822	16,536	4,714
1945	589,100	-2.6	-15,600	-26,992	-4.5	11,392	15,937	4,545
1946	638,000	7.7	48,900	36,649	6.2	12,251	16,955	4,704
1947	636,000	-0.3	-2,000	-19,178	-3.0	17,178	21,905	4,727
1948	653,000	2.6	17,000	943	0.1	16,057	20,856	4,799
1949	670,800	2.7	17,800	2,207	0.3	15,593	20,354	4,761
1950	695,900	3.6	25,100	8,966	1.3	16,134	21,027	4,893
1951	706,100	1.4	10,200	-6,842	-1.0	17,042	21,801	4,759
1952	723,000	2.3	16,900	-1,160	-0.2	18,060	23,116	5,056
1953	739,000	2.2	16,000	-2,889	-0.4	18,889	23,573	4,684
1954	750,000	1.5	11,000	-7,469	-1.0	18,469	23,439	4,970
1955	783,000	4.2	33,000	13,484	1.8	19,516	24,584	5,068
1956	809,000	3.2	26,000	6,348	0.8	19,652	24,975	5,323
1957	826,000	2.1	17,000	-3,139	-0.4	20,139	25,443	5,304
1958	845,000	2.2	19,000	-855	-0.1	19,855	25,760	5,905
1959	870,000	2.9	25,000	5,259	0.6	19,741	25,610	5,869
1960	900,000	3.3	30,000	9,947	1.1	20,053	26,011	5,958
1961	936,000	3.8	36,000	15,371	1.7	20,629	26,560	5,931
1962	958,000	2.3	22,000	1,817	0.2	20,183	26,431	6,248
1963	974,000	1.6	16,000	-3,317	-0.3	19,317	25,648	6,331
1964	978,000	0.4	4,000	-13,863	-1.4	17,863	24,461	6,598
1965	991,000	1.3	13,000	-3,553	-0.4	16,553	23,082	6,529
1966	1,009,000	1.8	18,000	2,810	0.3	15,190	21,953	6,763
1967	1,019,000	1.0	10,000	-6,350	-0.6	16,350	23,030	6,680
1968	1,029,000	1.0	10,000	-6,029	-0.6	16,029	22,743	6,714
1969	1,047,000	1.7	18,000	798	0.1	17,202	24,033	6,831
1970	1,066,000	1.8	19,000	612	0.1	18,388	25,281	6,893
1971	1,101,000	3.2	35,000	14,816	1.4	20,184	27,400	7,216
1972	1,135,000	3.0	34,000	14,096	1.3	19,904	27,146	7,242
1973	1,169,000	2.9	34,000	13,960	1.2	20,040	27,562	7,522
1974	1,197,000	2.3	28,000	6,621	0.6	21,379	28,876	7,497
1975	1,234,000	3.0	37,000	13,947	1.2	23,053	30,566	7,513
1976	1,272,000	3.0	38,000	11,611	0.9	26,389	33,773	7,384
1977	1,316,000	3.3	44,000	14,924	1.2	29,076	36,707	7,631
1978	1,364,000	3.5	48,000	17,420	1.3	30,580	38,289	7,709
1979	1,416,000	3.7	52,000	19,668	1.4	32,332	40,216	7,884
1980	1,474,000	3.9	58,000	24,486	1.7	33,514	41,645	8,131
1981	1,515,000	2.7	41,000	7,612	0.5	33,388	41,509	8,121
1982	1,558,000	2.8	43,000	9,662	0.6	33,338	41,773	8,435
1983	1,595,000	2.3	37,000	4,914	0.3	32,086	40,555	8,469
1984	1,622,000	1.7	27,000	-2,793	-0.2	29,793	38,643	8,850
1985	1,643,000	1.3	21,000	-7,714	-0.5	28,714	37,664	8,950
1986	1,663,000	1.2	20,000	-8,408	-0.5	28,408	37,309	8,901
1987	1,678,000	0.9	15,000	-11,713	-0.7	26,713	35,631	8,918
1988	1,690,000	0.7	12,000	-14,557	-0.9	26,557	35,809	9,252
1989	1,706,000	0.9	16,000	-10,355	-0.6	26,355	35,439	9,084
1990	1,729,000	1.3	23,000	-3,707	-0.2	26,707	35,830	9,123
1991	1,775,000	2.6	46,000	19,235	1.1	26,765	36,194	9,429
1992	1,822,000	2.6	47,000	19,763	1.1	27,237	36,796	9,559
1993	1,866,000	2.4	44,000	17,317	1.0	26,683	36,738	10,055
1994	1,916,000	2.6	50,000	22,788	1.2	27,212	37,623	10,411
1995	1,959,351	2.2	43,351	14,868	0.8	28,483	39,064	10,581
1996	2,002,400	2.1	43,049	13,555	0.7	29,494	40,495	11,001
1997	2,048,753	2.3	46,353	15,090	0.8	31,263	42,512	11,249
1998	2,083,238	1.7	34,485	2,007	0.1	32,478	44,126	11,648

Note: Before 1995, the Utah Population Estimates Committee rounded its population estimates. The estimated increase for 1994 to 1995 is based on the unrounded estimate for 1994 of 1,915,604.

Source: Utah Population Estimates Committee

Table 2
Components of Population Change in Utah by County and Multi-County District
July 1, 1997 and July 1, 1998

County/District	July 1 Population		Population Change 1997-98		Components of Change 1997-98			
	1997	1998	Numerical	Percent	Births	Deaths	Natural Increase	Net Migration
Beaver	5,742	5,678	(64)	-1.1	117	56	61	(125)
Box Elder	40,235	40,996	761	1.9	770	256	514	247
Cache	84,186	86,240	2,054	2.4	2,121	391	1,730	324
Carbon	21,643	21,547	(96)	-0.4	338	208	130	(226)
Daggett	753	713	(40)	-5.3	8	6	2	(42)
Davis	224,307	229,529	5,222	2.3	4,488	972	3,516	1,706
Duchesne	14,402	14,376	(26)	-0.2	237	81	156	(182)
Emery	10,929	10,939	10	0.1	191	61	130	(120)
Garfield	4,525	4,517	(8)	-0.2	73	48	25	(33)
Grand	8,830	8,887	57	0.6	122	56	66	(9)
Iron	29,338	30,477	1,139	3.9	726	183	543	596
Juab	7,702	7,978	276	3.6	170	64	106	170
Kane	6,039	6,155	116	1.9	94	49	45	71
Millard	12,068	12,054	(14)	-0.1	192	94	98	(112)
Morgan	6,875	7,086	211	3.1	111	26	85	126
Piute	1,534	1,583	49	3.2	15	21	(6)	55
Rich	1,788	1,791	3	0.2	26	10	16	(13)
Salt Lake	830,627	837,710	7,083	0.9	17,214	4,828	12,386	(5,303)
San Juan	13,541	13,457	(84)	-0.6	220	51	169	(253)
Sanpete	20,581	21,244	663	3.2	400	147	253	410
Sevier	18,238	18,629	391	2.1	306	140	166	225
Summit	24,675	25,630	955	3.9	400	74	326	629
Tooele	31,997	33,569	1,572	4.9	712	212	500	1,072
Uintah	24,637	24,436	(201)	-0.8	445	147	298	(499)
Utah	330,803	340,816	10,013	3.0	8,876	1,529	7,347	2,666
Wasatch	12,925	13,653	728	5.6	268	74	194	534
Washington	76,348	78,605	2,257	3.0	1,674	571	1,103	1,154
Wayne	2,440	2,437	(3)	-0.1	45	18	27	(30)
Weber	181,045	182,506	1,461	0.8	3,767	1,275	2,492	(1,031)
Bear River	126,209	129,027	2,818	2.2	2,917	657	2,260	558
Wasatch Front	1,274,851	1,290,400	15,549	1.2	26,292	7,313	18,979	(3,430)
Mountainland	368,403	380,099	11,696	3.2	9,544	1,677	7,867	3,829
Six County	62,563	63,925	1,362	2.2	1,128	484	644	718
Five County	121,992	125,432	3,440	2.8	2,684	907	1,777	1,663
Uintah Basin	39,792	39,525	(267)	-0.7	690	234	456	(723)
Southeast	54,943	54,830	(113)	-0.2	871	376	495	(608)
State	2,048,753	2,083,238	34,485	1.7	44,126	11,648	32,478	2,007

Source: Utah Population Estimates Committee.

Figure 2
Population Growth Rates in Utah Counties
1997 to 1998

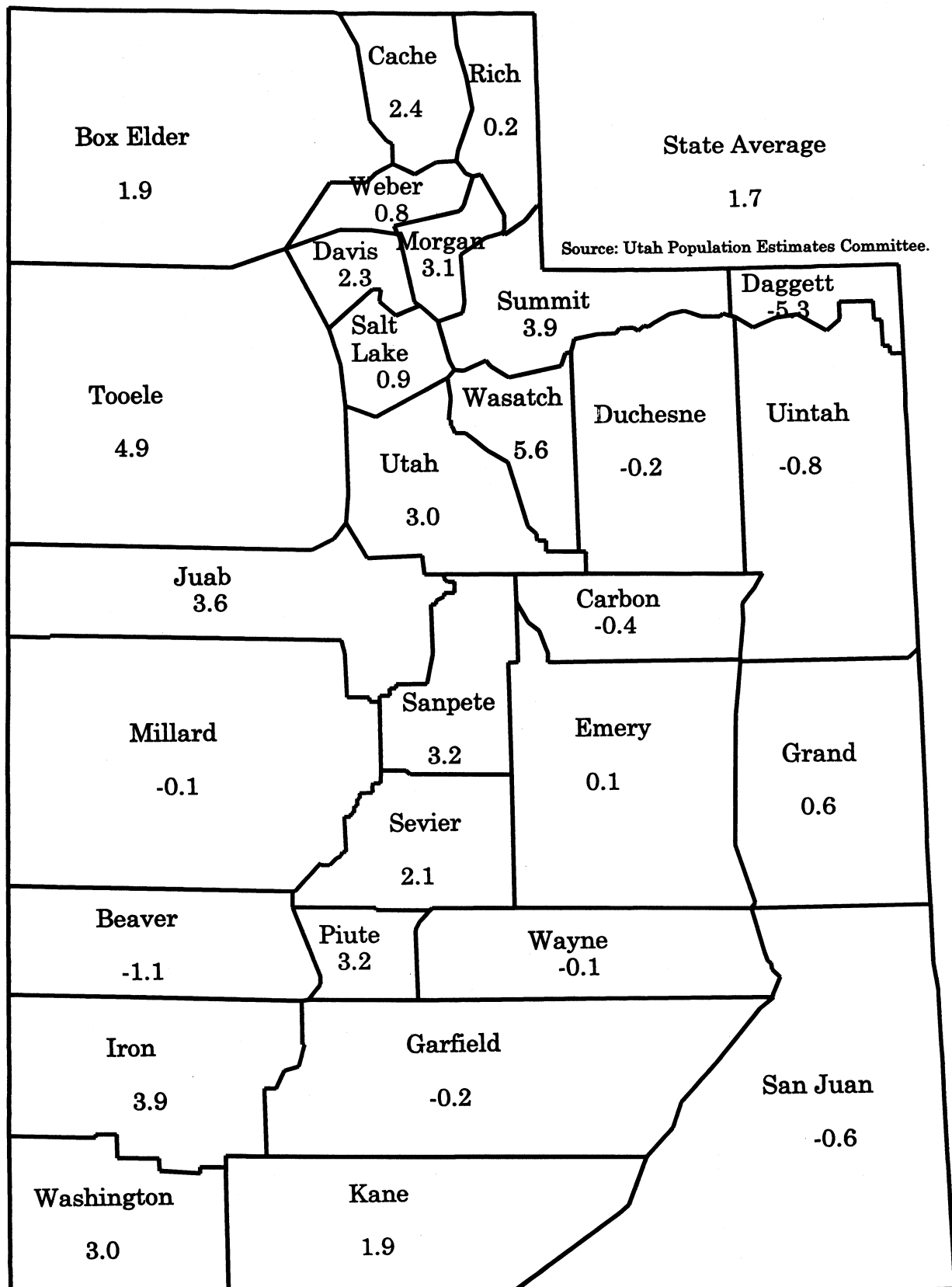


Table 3
Population Estimates for Utah
by County and Multi-County District, Selected Years 1940 to 1997

County/District	July 1 Population Estimates							Average Annual Growth Rates for the Period									
	1940	1950	1960	1970	1980	1990	1995	1996	1997	1998	1940s	1950s	1960s	1970s	1980s	1990-98	1997-98
Beaver	4,900	4,800	4,300	3,850	4,400	4,800	5,378	5,607	5,742	5,678	-0.2%	-1.1%	-1.1%	1.3%	0.9%	2.1%	-1.1%
Box Elder	18,900	19,800	25,500	28,150	33,500	36,500	38,830	39,484	40,235	40,996	0.5%	2.6%	1.0%	1.8%	0.9%	1.5%	1.9%
Cache	29,900	33,600	36,100	42,550	57,700	70,500	80,254	82,098	84,186	86,240	1.2%	0.7%	1.7%	3.1%	2.0%	2.6%	2.4%
Carbon	18,700	24,800	21,200	15,750	22,400	20,200	21,051	21,420	21,643	21,547	2.9%	-1.6%	-2.9%	3.6%	-1.0%	0.8%	-0.4%
Daggett	600	400	1,200	650	750	700	788	803	753	713	-4.0%	11.6%	-5.9%	1.4%	-0.7%	0.2%	-5.3%
Davis	15,500	31,200	65,600	99,600	148,000	188,000	214,994	219,644	224,307	229,529	7.2%	7.7%	4.3%	4.0%	2.4%	2.5%	2.3%
Duchesne	8,700	8,100	7,200	7,400	12,700	12,600	13,646	14,032	14,402	14,376	-0.7%	-1.2%	0.3%	5.5%	-0.1%	1.7%	-0.2%
Emery	7,000	6,300	5,500	5,150	11,600	10,300	10,669	10,811	10,929	10,939	-1.0%	-1.3%	-0.7%	8.5%	-1.2%	0.8%	0.1%
Garfield	5,300	4,100	3,500	3,150	3,700	3,950	4,308	4,386	4,525	4,517	-2.5%	-1.6%	-1.0%	1.6%	0.7%	1.7%	-0.2%
Grand	2,200	1,900	6,400	6,600	8,250	6,600	8,352	8,801	8,830	8,887	-1.4%	12.9%	0.3%	2.3%	-2.2%	3.8%	0.6%
Iron	8,400	9,700	10,900	12,300	17,500	20,900	26,927	28,032	29,338	30,477	1.4%	1.2%	1.2%	3.6%	1.8%	4.8%	3.9%
Juab	7,400	5,900	4,500	4,600	5,550	5,800	7,174	7,444	7,702	7,978	-2.2%	-2.7%	0.2%	1.9%	0.4%	4.1%	3.6%
Kane	2,600	2,300	2,700	2,450	4,050	5,150	5,880	5,957	6,039	6,155	-1.2%	1.6%	-1.0%	5.2%	2.4%	2.3%	1.9%
Millard	9,700	9,300	7,900	7,050	9,050	11,300	11,880	11,958	12,068	12,054	-0.4%	-1.6%	-1.1%	2.5%	2.2%	0.8%	-0.1%
Morgan	2,600	2,500	2,800	4,050	4,950	5,550	6,527	6,693	6,875	7,086	-0.4%	1.1%	3.8%	2.0%	1.2%	3.1%	3.1%
Mt. Pleasant	2,200	1,900	1,400	1,150	1,350	1,250	1,462	1,508	1,534	1,583	-1.5%	-3.0%	-1.9%	1.6%	-0.8%	3.0%	3.2%
Rich	2,000	1,700	1,700	1,600	2,150	1,750	1,807	1,821	1,788	1,791	-1.6%	0.0%	-0.6%	3.0%	-2.0%	0.3%	0.2%
Salt Lake	213,700	279,000	387,800	461,500	625,000	728,000	806,280	818,860	830,627	837,710	2.7%	3.3%	1.8%	3.1%	1.5%	1.8%	0.9%
San Juan	4,600	5,300	8,900	9,700	12,400	12,600	13,414	13,215	13,541	13,457	1.4%	5.3%	0.9%	2.5%	0.2%	0.8%	-0.6%
Sanpete	15,900	13,800	11,100	11,000	14,800	16,300	19,216	19,999	20,581	21,244	-1.4%	-2.2%	-0.1%	3.0%	1.0%	3.4%	3.2%
Sevier	12,300	12,000	10,600	10,150	14,900	15,400	17,350	17,682	18,238	18,629	-0.2%	-1.2%	-0.4%	3.9%	0.3%	2.4%	2.1%
Summit	8,600	6,700	5,700	5,900	10,400	15,700	22,367	23,562	24,675	25,630	-2.5%	-1.6%	0.3%	5.8%	4.2%	6.3%	3.9%
Tooele	8,800	15,000	18,000	21,600	26,200	26,700	29,522	30,493	31,997	33,569	5.5%	1.8%	1.8%	1.9%	0.2%	2.9%	4.9%
Utah	10,000	10,300	11,700	12,800	20,700	22,200	24,235	24,276	24,637	24,436	0.3%	1.3%	0.9%	4.9%	0.7%	1.2%	-0.8%
Wasatch	56,900	83,000	108,300	139,300	220,000	266,000	308,607	317,881	330,803	340,816	3.8%	2.7%	2.5%	4.7%	1.9%	3.1%	3.0%
Washington	5,800	5,500	5,300	5,950	8,650	10,100	12,168	12,585	12,925	13,653	-0.5%	-0.4%	1.2%	3.8%	1.6%	3.8%	5.6%
Wayne	9,200	9,800	10,400	13,900	26,400	49,100	68,475	72,892	76,348	78,605	0.6%	0.6%	2.9%	6.6%	6.4%	6.1%	3.0%
Weber	2,300	2,200	1,700	1,450	1,950	2,150	2,315	2,390	2,440	2,437	-0.4%	-2.5%	-1.6%	3.0%	1.0%	1.6%	-0.1%
	57,100	85,000	112,100	126,700	145,000	159,000	175,150	178,066	181,045	182,506	4.1%	2.8%	1.2%	1.4%	0.9%	1.7%	0.8%
Bear River	50,800	55,100	63,300	72,300	93,350	108,750	120,891	123,403	126,209	129,027	0.8%	1.4%	1.3%	2.6%	1.5%	2.2%	2.2%
Wasatch Front	297,700	412,700	586,300	713,450	949,150	1,107,250	1,232,473	1,253,756	1,274,851	1,290,400	3.3%	3.6%	2.0%	2.9%	1.6%	1.9%	1.2%
Mountainland	71,300	95,200	119,300	151,150	239,050	291,800	343,142	354,028	368,403	380,099	2.9%	2.3%	2.4%	4.7%	2.0%	3.4%	3.2%
Six County	49,800	45,100	37,200	35,400	47,600	52,200	59,397	60,981	62,563	63,925	-1.0%	-1.9%	-0.5%	3.0%	0.9%	2.6%	2.2%
Five County	30,400	30,700	31,800	35,650	56,050	83,900	110,968	116,874	121,992	125,432	0.1%	0.4%	1.1%	4.6%	4.1%	5.2%	2.8%
Utah Basin	19,300	18,800	20,100	20,850	34,150	35,500	38,669	39,111	39,792	39,525	-0.3%	0.7%	0.4%	5.1%	0.4%	1.4%	-0.7%
Southeast	32,500	38,300	42,000	37,200	54,650	49,700	53,486	54,247	54,943	54,830	1.7%	0.9%	-1.2%	3.9%	-0.9%	1.2%	-0.2%
State	552,000	696,000	900,000	1,066,000	1,474,000	1,729,000	1,959,026	2,002,400	2,048,753	2,083,238	2.3%	2.6%	1.7%	3.3%	1.6%	2.4%	1.7%

Note: Before 1985, the Utah Population Estimates Committee rounded its population estimates.

Source: Utah Population Estimates Committee

the growth from 1995 to 1996 fell to 1.6 percent, followed successively by 1.4 percent for 1997 over 1996, then 0.9 percent for 1998 over 1997. As a result, the average annual growth rate for Salt Lake County in this decade has slowed to 1.8 percent.

A number of counties have had growth patterns substantially different from the state as a whole. While Utah's population grew strongly in both the 1940s and the 1950s, 12 counties actually had declining populations in both decades. Juab County's population had the greatest percentage decline during this period, about 2.5 percent per year, from 7,400 in 1940 to 4,500 in 1960. During 1996, Juab's population finally surpassed the 1940 level. Juab's current growth reflects the expansion of the Wasatch Front urban area into the eastern portion of the county.

In contrast to Juab, the 1998 populations in Garfield, Piute and Rich Counties were lower than in 1940. Although the 1960s and 1980s were slow growth periods for the state as a whole, some counties still grew rapidly during these two decades. During the 1960s, Davis and Morgan counties grew at more than twice the state average, 4.3 and 3.8 percent per year, respectively, while Washington and Summit counties grew at more than twice the state average during the 1980s, 6.4 and 4.2 percent per year, respectively. During both the 1970s and the first eight years of the 1990s, every county posted population increases. In the 1970s Beaver County had the lowest growth rate, 1.3 percent per year, and in the 1990s, Daggett County had the lowest, 0.2 percent per year.

Components of Population Change

Population change is comprised of two components: natural increase and net migration. In turn, both of these have two components as well. Natural increase is the number of births less the number of deaths. Net migration is in-migration less out-migration, or the number of people moving into a place less the number of people moving out. Table 1 and Figure 1 present the components of Utah's population change from 1940 to 1998, as of July 1 each year. Table 2 presents the components of population change from 1997 to 1998 for the counties and MCDs.

Natural Increase

Natural increase is computed from records maintained by the Utah Department of Health. As presented in Table 2, natural increase in Utah during 1998 was 32,478, which was the difference between

44,126 births and 11,648 deaths. The largest natural increase recorded since 1950 was 33,514 in 1980. The largest number of births, however, was during this past year. Of course, the reason natural increase was larger in 1980 than in 1998, even though there were more births in 1998, is that the number of deaths was proportionately higher in 1998. While the number of births has varied dramatically from one period to the next, the number of deaths, for the most part, has increased slowly and steadily since 1950.

Net migration

Net migration is positive when in-migration exceeds out-migration and negative when out-migration exceeds in-migration. In the population estimates developed by UPEC, net migration is not estimated directly. Rather, net migration is computed as the implied difference between estimated population change and natural increase as computed from the records maintained by the Department of Health. No attempt is made to estimate net migration directly. In addition, no attempt is made to estimate the components of net migration, in-migration and out-migration.

The 1990s have been a period of sustained net in-migration, though the 1998 level of 2,007 was substantially lower than the levels reached from 1991 to 1997. While the recent level of in-migration has been high, migration rates (net migration as a percent of the base or previous year population), were higher during the 1970s, as well as a few years in the 1940s, 1950s and 1960s.

While it is not known where these recent migrants came from, data from the Internal Revenue Service and the 1990 Census highlight some interesting points: California dominates the flow of interstate migration to and from Utah; the extended Salt Lake area has strong migration ties with the major metropolitan areas south and west of Utah, such as Los Angeles, Phoenix, Portland, Seattle and Las Vegas. Employment-related migration accounts for the vast majority of population movement to and from Utah.¹

Utah Population Estimates Committee (UPEC)

UPEC develops and agrees upon the official population estimates for Utah and the 29 counties in the state. Coordination and staffing of UPEC is the responsibility of the Demographic and Economic Analysis Section of the Governor's Office of Planning and Budget. UPEC membership includes representatives from state government, universities, and other organizations with knowledge of the data used in

making population estimates. A list of UPEC members appears on the back page.

In addition to staffing UPEC, the Demographic and Economic Analysis section represents the state in the Federal-State Cooperative for Population Estimates. This program, administered by the U.S. Bureau of the Census, facilitates the exchange of data used in making population estimates. The program also provides a forum for dialog that can improve the quality of state and county estimates made by both parties. Bureau of the Census population estimates are discussed later in this article.

Methods

For the most part, UPEC has traditionally developed population estimates using a method based on school enrollment in combination with a method based on membership in the Church of Jesus Christ of Latter-day Saints (LDS). Since 1995, UPEC has added a third method based on tax return data from the Internal Revenue Service (IRS). Each of these methods will be discussed in more detail below. Table 4 presents the population estimates and implied net migration resulting from each method. The IRS method yielded the highest state total population, 2,091,567, followed by the school enrollment method, 2,083,398, and the LDS method, 2,074,823. The ultimate estimates, with some exceptions, were based on an adjusted average of the three methods.

As circumstances warrant, UPEC augments the school enrollment, LDS, and IRS methods with other methods such as a method based on employment data. In developing the 1995 and 1996 estimates, UPEC decided the LDS and school enrollment methods yielded unreasonably low population estimates given the strong performance of Utah's economy during those years.

UPEC's approach to considering the IRS method in combination with the LDS and school enrollment methods is presented in Table 5. UPEC decided not to include the estimate generated with a particular method if that method's estimate was more than 2 percent different from the estimate generated from the average of the three methods. If an estimate was 2 percent higher than the average it was termed a high outlier in Table 5. Likewise, if an estimate was 2 percent lower, it was termed a low outlier. UPEC used the average of the three methods in 25 of Utah's 29 counties. In those counties where only one of the methods was considered, the ultimate estimate was simply the estimate generated by the particular

method. In those counties where two methods were considered, the estimate was based on the average of the two methods. The four counties in which UPEC used an estimate based on one or the average of two methods are: Daggett, Piute, San Juan, and Wasatch.

School Enrollment Method

The school enrollment method uses changes in school enrollment as an indicator of net migration. This method compares a county's survived enrollment (calculated by applying a survival rate of 99.98 percent to the enrollment count), in grades 1 to 8 for the year prior to the estimate year, to enrollment in grades 2 to 9 for the estimate year. The difference between these two enrollment totals is taken to be net student migration for the county. Total net migration from the school enrollment method for the county is then derived by multiplying the county's student migration estimate by the county-specific total population-to-student ratio. This ratio is defined as the total population estimate of the county for the prior year divided by the same year's enrollment in grades 1 to 8.

The school enrollment population estimate is computed by adding natural increase and net migration to the previous year's population. This method is limited in estimating migration among the retired, college students, single persons, and other groups that are not represented in school enrollment estimates.

LDS Membership Method

The LDS Church maintains membership records that allow a reasonably precise count of the LDS population by county. UPEC relies on this data to estimate the state and county populations. With the LDS method, the growth rate in LDS membership in a particular county is applied to the previous year's population estimate for the county. If the LDS method was the only method used to estimate population, this procedure would be the same as maintaining a constant LDS ratio. Since the previous year's estimate is derived from several methods, in general, the LDS share of the population estimate generated using the LDS method changes from year to year.

IRS Tax Exemption Method

The IRS tax exemption method uses the growth in exemptions reported on tax returns filed with the IRS as an indicator of population growth. The growth rate in exemptions for the previous calendar year is applied to the previous fiscal year population to estimate the current fiscal year population. This

Table 4
Utah Population Estimates by County and Multi-County District
An Average of Three Methods with Judgement in Selected Counties

County/District	School Enrollment			LDS			IRS			Average of Three Methods			Estimate Based on Judgement in Select Counties		
	July 1, 1997 Population	Natural Increase	July 1, 1998 Population	Implied Net Migration	July 1, 1998 Population	Implied Net Migration	July 1, 1998 Population	Implied Net Migration	July 1, 1998 Population	Implied Net Migration	July 1, 1998 Population	Implied Net Migration	July 1, 1998 Population	Implied Net Migration	July 1, 1998 Population
Beaver	5,742	61	5,578	-225	5,693	-110	5,762	-41	5,678	-125	5,678	-125	5,678	-125	5,678
Box Elder	40,235	514	41,511	762	40,763	14	40,715	-34	40,996	247	40,996	247	40,996	247	40,996
Cache	84,186	1,730	86,229	313	86,199	283	86,293	377	86,240	324	86,240	324	86,240	324	86,240
Carbon	21,643	130	21,652	-121	21,315	-458	21,675	-98	21,547	-226	21,547	-226	21,547	-226	21,547
Daggett	753	2	713	-42	693	-62	742	-13	716	-39	716	-39	713	-42	713
Davis	224,307	3,516	229,110	1,287	229,309	1,486	230,167	2,344	229,529	1,706	229,529	1,706	229,529	1,706	229,529
Duchesne	14,402	156	14,282	-276	14,229	-329	14,618	60	14,376	-182	14,376	-182	14,376	-182	14,376
Emery	10,929	130	10,880	-179	10,920	-139	11,017	-42	10,939	-120	10,939	-120	10,939	-120	10,939
Garfield	4,525	25	4,400	-150	4,564	14	4,587	37	4,517	-33	4,517	-33	4,517	-33	4,517
Grand	8,830	66	8,914	18	8,875	-21	8,872	-24	8,887	-9	8,887	-9	8,887	-9	8,887
Iron	29,338	543	30,679	798	30,016	135	30,736	855	30,477	596	30,477	596	30,477	596	30,477
Juab	7,702	106	7,863	55	7,998	190	8,072	264	7,978	170	7,978	170	7,978	170	7,978
Kane	6,039	45	6,264	180	5,914	-170	6,288	204	6,155	71	6,155	71	6,155	71	6,155
Millard	12,068	98	12,066	-105	12,038	-128	12,062	-104	12,054	-112	12,054	-112	12,054	-112	12,054
Morgan	6,875	85	7,196	236	7,004	44	7,059	99	7,086	126	7,086	126	7,086	126	7,086
Plute	1,534	-6	1,634	106	1,579	51	1,587	59	1,600	72	1,600	72	1,583	55	1,583
Rich	1,788	16	1,792	-12	1,802	-2	1,780	-24	1,791	-13	1,791	-13	1,791	-13	1,791
Salt Lake	830,627	12,386	836,694	-6,319	834,216	-8,797	842,220	-793	837,710	-5,303	837,710	-5,303	837,710	-5,303	837,710
San Juan	13,541	169	13,569	-141	13,874	164	13,345	-365	13,596	-114	13,596	-114	13,457	-253	13,457
Sanpete	20,581	253	21,225	391	21,083	249	21,424	590	21,244	410	21,244	410	21,244	410	21,244
Sevier	18,238	166	19,024	620	18,225	-179	18,639	235	18,629	225	18,629	225	18,629	225	18,629
Summit	24,675	326	25,741	740	25,202	201	25,947	946	25,630	629	25,630	629	25,630	629	25,630
Tooele	31,997	500	33,107	610	33,799	1,302	33,802	1,305	33,569	1,072	33,569	1,072	33,569	1,072	33,569
Uintah	24,637	298	24,565	-370	25,002	67	23,741	-1,194	24,436	-499	24,436	-499	24,436	-499	24,436
Utah	330,803	7,347	341,707	3,557	338,504	354	342,236	4,086	340,816	2,666	340,816	2,666	340,816	2,666	340,816
Wasatch	12,925	194	13,751	632	13,245	126	13,555	436	13,517	398	13,517	398	13,653	534	13,653
Washington	76,348	1,103	78,474	1,023	78,356	905	78,986	1,535	78,605	1,154	78,605	1,154	78,605	1,154	78,605
Wayne	2,440	27	2,460	-7	2,417	-50	2,434	-33	2,437	-30	2,437	-30	2,437	-30	2,437
Weber	181,045	2,492	182,323	-1,214	181,989	-1,548	183,206	-331	182,506	-1,031	182,506	-1,031	182,506	-1,031	182,506
Bear River	126,209	2,260	129,532	1,063	128,764	295	128,788	319	129,027	558	129,027	558	129,027	558	129,027
Wasatch Front	1,274,851	18,979	1,288,430	-5,400	1,286,317	-7,513	1,296,454	2,624	1,290,400	-3,430	1,290,400	-3,430	1,290,400	-3,430	1,290,400
Mountainland	368,403	7,867	381,199	4,929	376,951	681	381,738	5,468	379,963	3,693	379,963	3,693	380,099	3,829	380,099
Six County	62,563	644	64,267	1,060	63,340	133	64,218	1,011	63,942	735	63,942	735	63,925	718	63,925
Five County	121,992	1,777	125,395	1,626	124,543	774	126,359	2,590	125,432	1,663	125,432	1,663	125,432	1,663	125,432
Uintah Basin	39,792	456	39,560	-688	39,924	-324	39,101	-1,147	39,528	-720	39,528	-720	39,525	-723	39,525
Southeast	54,943	495	55,015	-423	54,984	-454	54,909	-529	54,969	-469	54,969	-469	54,830	-608	54,830
Slate	2,048,753	32,478	2,083,398	2,167	2,074,823	-6,408	2,091,567	10,336	2,083,261	2,030	2,083,261	2,030	2,083,238	2,007	2,083,238

Note: In most counties, the estimate is the average of the estimates produced from each of the three methods. Table 5 details the procedure used to develop the estimate when the average of the three methods was not used.
Source: Utah Population Estimates Committee.

Table 5
Utah Population Estimates by County and Multi-County District
Outlier Analysis of Estimates Produced with Three Methods

County	July 1, 1997 Population	Natural Increase	July 1, 1998 Population Estimate			Outlier Analysis			No Outlier Average	Implied Net Migration
			School	LDS	IRS	School	LDS	IRS		
Beaver	5,742	61	5,578	5,693	5,762	5,578	5,693	5,762	5,678	-125
Box Elder	40,235	514	41,511	40,763	40,715	41,511	40,763	40,715	40,996	247
Cache	84,186	1,730	86,229	86,199	86,293	86,229	86,199	86,293	86,240	324
Carbon	21,643	130	21,652	21,315	21,675	21,652	21,315	21,675	21,547	-226
Daggett	753	2	713	693	742	713	Low Outlier	High Outlier	713	-42
Davis	224,307	3,516	229,110	229,309	230,167	229,110	229,309	230,167	229,529	1,706
Duchesne	14,402	156	14,282	14,229	14,618	14,282	14,229	14,618	14,376	-182
Emery	10,929	130	10,880	10,920	11,017	10,880	10,920	11,017	10,939	-120
Garfield	4,525	25	4,400	4,564	4,587	4,400	4,564	4,587	4,517	-33
Grand	8,830	66	8,914	8,875	8,872	8,914	8,875	8,872	8,887	-9
Iron	29,338	543	30,679	30,016	30,736	30,679	30,016	30,736	30,477	596
Juab	7,702	106	7,863	7,998	8,072	7,863	7,998	8,072	7,978	170
Kane	6,039	45	6,264	5,914	6,288	6,264	5,914	6,288	6,155	71
Millard	12,068	98	12,061	12,038	12,062	12,061	12,038	12,062	12,054	-112
Morgan	6,875	85	7,196	7,004	7,059	7,196	7,004	7,059	7,086	126
Piute	1,534	-6	1,634	1,579	1,587	High Outlier	1,579	1,587	1,583	55
Rich	1,788	16	1,792	1,802	1,780	1,792	1,802	1,780	1,791	-13
Salt Lake	830,627	12,386	836,694	834,216	842,220	836,694	834,216	842,220	837,710	-5,303
San Juan	13,541	169	13,569	13,874	13,345	13,569	High Outlier	13,345	13,457	-253
Sanpete	20,581	253	21,225	21,083	21,424	21,225	21,083	21,424	21,244	410
Sevier	18,238	166	19,024	18,225	18,639	19,024	18,225	18,639	18,629	225
Summit	24,675	326	25,741	25,202	25,947	25,741	25,202	25,947	25,630	629
Tooele	31,997	500	33,107	33,799	33,802	33,107	33,799	33,802	33,569	1,072
Uintah	24,637	298	24,565	25,002	23,741	24,565	25,002	23,741	24,436	-499
Utah	330,803	7,347	341,707	338,504	342,236	341,707	338,504	342,236	340,816	2,666
Wasatch	12,925	194	13,751	13,245	13,555	13,751	Low Outlier	13,555	13,653	534
Washington	76,348	1,103	78,474	78,356	78,986	78,474	78,356	78,986	78,605	1,154
Wayne	2,440	27	2,460	2,417	2,434	2,460	2,417	2,434	2,437	-30
Weber	181,045	2,492	182,323	181,989	183,206	182,323	181,989	183,206	182,506	-1,031
Total	2,048,753	32,478	2,083,398	2,074,823	2,091,567				2,083,238	2,007

Note: An estimate was termed outlier if it was more than 2 percent different from the average of the three methods. High outliers are 2 percent greater than average while low outliers are 2 percent less than average.

Source: Utah Population Estimates Committee.

method is relatively accurate as long as the tax code is stable and the percent of the population filing tax returns does not vary much from year to year.

Population Issues: Crude Birth and Death Rates and Population Density

Two distinguishing features of Utah's population are its birth and death rates and its density. Crude birth and death rates are simply the number of births and deaths as a percent of the total population.² Compared to the nation, Utah has consistently had a high crude birth rate and a low crude death rate. Utah's population density is interesting because the state is one of the most urban states in the nation, but it is one of the least densely populated.³

Crude Birth and Death Rates

A large part of the reason Utah has a relatively high crude birth rate and a relatively low crude death rate is that its population is younger on average than the nation's. Comparing birth and death rates for specific ages, Utah is much closer to the nation, but, even after adjusting for age, the state still has higher birth rates and lower death rates.

Crude birth and death rates for Utah and the U.S. are compared in Figure 3 for 1950 to 1997.⁴ Utah's crude birth rate has consistently been about one-half percentage point above the nation's. During the late 1970s, Utah's crude birth rate increased dramatically while the nation's remained essentially constant so that Utah was a full percentage point above the nation. During that time, Utah's birth rate was almost twice the nation's. Recently, Utah's birth rate has been about one-third greater than the nation's.

As Figure 3 depicts, crude death rates for both Utah and the U.S. tend to be more stable through time than crude birth rates, though both are about 10 percent lower now than in 1950. Utah's crude death rate has consistently been at least one-quarter percentage point below the nation's. During the 1970s and 1980s, however, Utah's death rate dropped more rapidly than the nation's, so that by 1997, Utah's death rate of 0.55 percent, was just 64 percent of the national rate of 0.86 percent.

Population Density

Population density is the number of persons living in a given area. Since a common measure of land area is square miles, density is commonly measured as persons per square mile. For a given area, then, density is the total population divided by the number of square miles encompassed by the area. Using U.S.

Bureau of the Census population estimates, Utah's population density can be compared with other parts of the nation. In 1998, Utah had 25.6 persons per square mile, compared to 76.4 for the country as a whole. At 1,093.8, New Jersey had the highest density of any state, about 15 percent more than Rhode Island, the second most densely populated state, with 945.9 persons per square mile. Closer to home, the Mountain Region,⁵ which includes Utah, had a density of 19.6 persons per square mile. Arizona was the most densely populated state in the region, with 41.1 persons per square mile, while Wyoming was the least densely populated, with 5.0 persons per square mile.

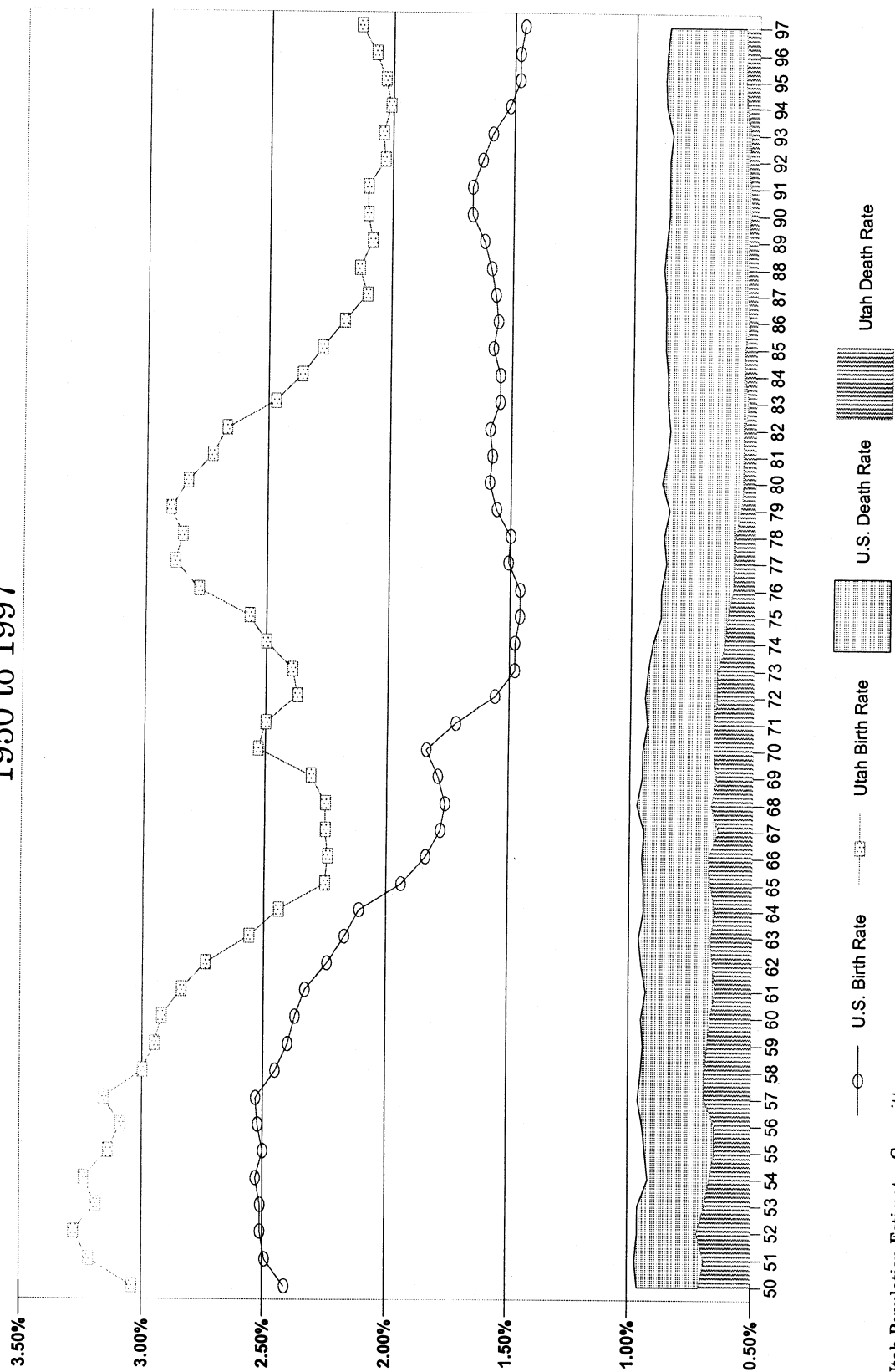
Figure 4 depicts population density by county in Utah during 1998. Salt Lake County, at 1,136.0 persons per square mile, and Davis County, at 753.8, are the most densely populated counties in the state. Weber, Utah and Cache Counties are the next most densely populated counties. These five counties are significantly more densely populated than the rest of the state. After these five, Washington, at 32.4 persons per square mile, is the most densely populated county. At 0.9 persons per square mile, Garfield is the least densely populated county.

U.S. Bureau of the Census Population Estimates

The U.S. Bureau of the Census, Population Estimates Branch, prepares post-censal population estimates for states, counties and sub-county areas. These estimates utilize different methodologies and, in some cases, different base data than UPEC. Since estimates prepared by UPEC generally include more recent data, consider a variety of methodologies and information sources, and incorporate the informed judgement of local people who are familiar with local indicators of population growth, they are widely utilized as the preferred source.

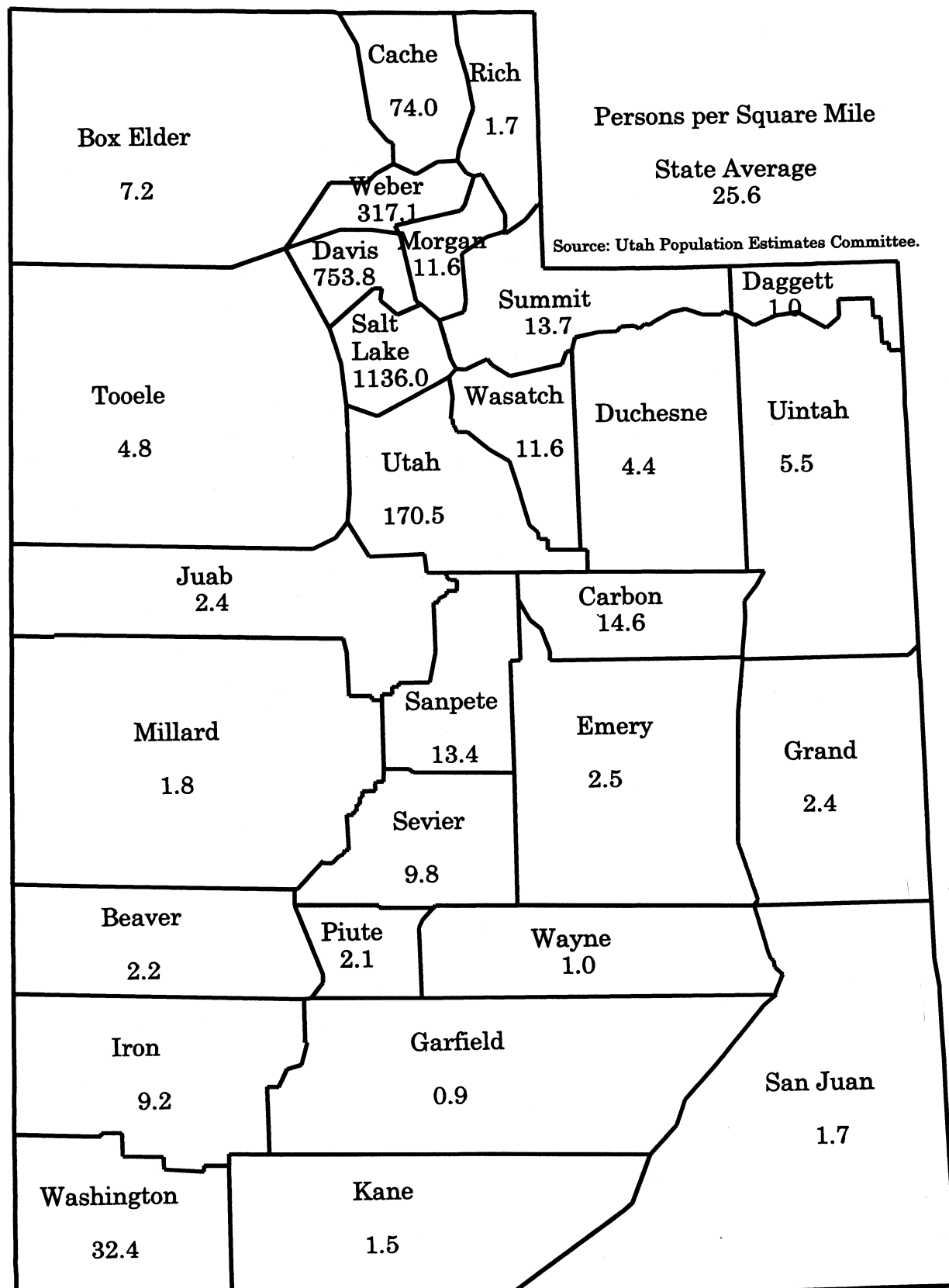
Estimates prepared by the Bureau of the Census, however, may be preferred in applications that require comparisons with other states or that are identified in statute as the source to be used. Utah statute explicitly states that Bureau of the Census numbers be used in calculating the state spending limitation and allocating local option sales taxes and class B and C road monies. Bureau of the Census estimates are also used by other federal data agencies and are currently the only statewide source of city estimates.

Figure 3
Crude Birth and Death Rates: Utah and U.S.
1950 to 1997



Source: Utah Population Estimates Committee.

Figure 4
Population Density in Utah Counties
July 1, 1998



Generally, estimates prepared by the Bureau of the Census and UPEC are reasonably close, although there are notable exceptions from year to year and county to county. The main differences in the two sources of estimates are the timing of input data, methodologies, and release of data. UPEC uses more current birth, death, and migration indicators. The Bureau of the Census methods rely heavily on IRS tax return data (as an indicator of migration) and Medicare and group quarters data.

There is a fairly significant difference in the formulation process of the estimates. The Census Bureau first develops a total U.S. population estimate using national vital records and migration estimates. These two databases are reliable and result in a reasonable estimate of the nation's population. The national population estimate includes detail by single year of age, sex, and race. Separately from the national estimate, an estimate for each county in the nation is developed. (The Census Bureau county estimate methodology is described in more detail below.) In a typical estimate year, in a typical county, estimates at the county level are developed for the population under age 65 and 65 and over. The totals of the 3,000 plus individual county population estimates for these two age groups are used to develop control factors. These control factors are then applied to each county estimate so the total of the controlled estimates equals the national population estimates for the two age groups. The process of controlling county population estimates to a separately determined national population estimate can introduce error to the estimating process. In addition, the Census made a number of special adjustments to its estimating technique for the counties in Utah. The resulting estimates are different from UPEC's.

In contrast to the Census, UPEC first examines data at the county level for its methodologies. The state estimate is then simply the sum of the independently produced county estimates.

The Census Bureau recently revised state population estimates for 1990 through 1997 and produced new estimates for 1998. During the earlier part of the decade, the Census Bureau estimates at the state level were lower than UPEC's by as much as 0.5 percent. In recent years, however, the Census Bureau estimates have been as much as 1.0 percent higher than UPEC's. This reversal is the product of two reinforcing efforts. First, the Census has increased the population estimates of a number of Utah cities and counties in response to local govern-

ment challenges. Second, UPEC argued the Census state estimate was too low. By 1998, the effect of these efforts was that the Census state estimate of 2,099,758, for Utah, is 16,520, or 0.8 percent, greater than the UPEC estimate of 2,083,238.

A comparison of the revised Census estimates for 1996 through 1998 with UPEC's estimates is presented in Table 6. Among the counties, the largest percent differences between the Census and UPEC occur among relatively small counties such as Piute and Grand where the percentage differences are large, but numeric differences are small. The largest numeric difference is in Salt Lake County, where the Census estimates the 1998 population to be 850,667, which is 12,957 (or 1.5 percent) more than UPEC's estimate of 837,710.

In general, the Census methodology tends to underestimate population in major university-influenced counties, specifically Utah, Iron, and, in the past, Cache. This occurs because IRS migration data miss many student in-migrants (those who have not filed a tax return prior to attending college), but capture a large number of student out-migrants (those who now file a tax return and leave school, possibly with dependents). UPEC's methods may not perform as well as some of the Census Bureau's techniques, however, in counties with a proportionately smaller LDS population or counties where school enrollment is a poor indicator of migration.

Bureau of the Census Methods⁶

The Bureau of the Census utilizes a method known as the Tax Return method (previously called Administrative Records method) to derive county estimates. This procedure relies on federal income tax data to estimate the net inter-county migration of the population under 65 years old; Immigration and Naturalization Service data to estimate net foreign migration; reported resident birth and death statistics to estimate natural change; and data on Medicare enrollees to estimate the population 65 years and older. Estimates for the population living outside of households are estimated based on the decennial census and data provided by each state. People living outside households are known as the group quarters population. This population includes military personnel living in barracks, college students living in dormitories, inmates of correctional facilities, and others.

Tax data for two successive years are used to determine the number of persons whose county of residence changed during the period. From this

Table 6
Comparison of Bureau of the Census and Utah Population Estimates Committee
July 1 Utah Population Estimates by County and Multi-County District

County/District	Utah Population Estimates Committee			Bureau of the Census			Numeric Difference			Percent Difference		
	1996	1997	1998	1996	1997	1998	1996	1997	1998	1996	1997	1998
Beaver	5,607	5,742	5,678	5,697	5,868	5,896	-90	-126	-218	-1.6	-2.2	-3.8
Box Elder	39,484	40,235	40,996	40,072	41,090	41,949	-588	-855	-953	-1.5	-2.1	-2.3
Cache	82,098	84,186	86,240	84,429	85,690	86,949	-2,331	-1,504	-709	-2.8	-1.8	-0.8
Carbon	21,420	21,643	21,547	20,719	20,916	20,966	701	727	581	3.3	3.4	2.7
Daggett	803	753	713	765	755	737	38	-2	-24	4.7	-0.3	-3.4
Davis	219,644	224,307	229,529	221,577	226,974	233,013	-1,933	-2,667	-3,484	-0.9	-1.2	-1.5
Duchesne	14,032	14,402	14,376	14,003	14,265	14,481	29	137	-105	0.2	1.0	-0.7
Emery	10,811	10,929	10,939	10,659	10,892	10,989	152	37	-50	1.4	0.3	-0.5
Garfield	4,386	4,525	4,517	4,151	4,202	4,272	235	323	245	5.4	7.1	5.4
Grand	8,801	8,830	8,887	8,036	8,103	8,068	765	727	819	8.7	8.2	9.2
Iron	28,032	29,338	30,477	26,989	27,783	28,659	1,043	1,555	1,818	3.7	5.3	6.0
Juab	7,444	7,702	7,978	7,044	7,256	7,572	400	446	406	5.4	5.8	5.1
Kane	5,957	6,039	6,155	6,010	6,068	6,200	-53	-29	-45	-0.9	-0.5	-0.7
Millard	11,958	12,068	12,054	12,175	12,259	12,249	-217	-191	-195	-1.8	-1.6	-1.6
Morgan	6,693	6,875	7,086	6,798	6,909	7,022	-105	-34	64	-1.6	-0.5	0.9
Piute	1,508	1,534	1,583	1,430	1,396	1,402	78	138	181	5.2	9.0	11.4
Rich	1,821	1,788	1,791	1,852	1,814	1,834	-31	-26	-43	-1.7	-1.5	-2.4
Salt Lake	818,860	830,627	837,710	827,780	841,477	850,667	-8,920	-10,850	-12,957	-1.1	-1.3	-1.5
San Juan	13,215	13,541	13,457	13,510	13,572	13,711	-295	-31	-254	-2.2	-0.2	-1.9
Sanpete	19,999	20,581	21,244	20,165	20,826	21,452	-166	-245	-208	-0.8	-1.2	-1.0
Sevier	17,682	18,238	18,629	17,593	18,015	18,452	89	223	177	0.5	1.2	1.0
Summit	23,562	24,675	25,630	24,488	25,619	26,746	-926	-944	-1,116	-3.9	-3.8	-4.4
Tooele	30,493	31,997	33,569	30,096	31,465	33,351	397	532	218	1.3	1.7	0.6
Uintah	24,276	24,637	24,436	24,928	25,441	25,660	-652	-804	-1,224	-2.7	-3.3	-5.0
Utah	317,881	330,803	340,816	321,199	329,333	335,635	-3,318	1,470	5,181	-1.0	0.4	1.5
Wasatch	12,585	12,925	13,653	12,283	12,774	13,267	302	151	386	2.4	1.2	2.8
Washington	72,892	76,348	78,605	75,948	79,436	82,115	-3,056	-3,088	-3,510	-4.2	-4.0	-4.5
Wayne	2,390	2,440	2,437	2,379	2,400	2,379	11	40	58	0.5	1.6	2.4
Weber	178,066	181,045	182,506	179,459	182,403	184,065	-1,393	-1,358	-1,559	-0.8	-0.8	-0.9
Bear River	123,403	126,209	129,027	126,353	128,594	130,732	-2,950	-2,385	-1,705	-2.4	-1.9	-1.3
Wasatch Front	1,253,756	1,274,851	1,290,400	1,265,710	1,289,228	1,308,118	-11,954	-14,377	-17,718	-1.0	-1.1	-1.4
Mountainland	354,028	368,403	380,099	357,970	367,726	375,648	-3,942	677	4,451	-1.1	0.2	1.2
Six County	60,981	62,563	63,925	60,786	62,152	63,506	195	411	419	0.3	0.7	0.7
Five County	116,874	121,992	125,432	118,795	123,357	127,142	-1,921	-1,365	-1,710	-1.6	-1.1	-1.4
Uintah Basin	39,111	39,792	39,525	39,696	40,461	40,878	-585	-669	-1,353	-1.5	-1.7	-3.4
Southeast	54,247	54,943	54,830	52,924	53,483	53,734	1,323	1,460	1,096	2.4	2.7	2.0
State	2,002,400	2,048,753	2,083,238	2,022,234	2,065,001	2,099,758	-19,834	-16,248	-16,520	-1.0	-0.8	-0.8

Source: Utah Population Estimates Committee and the U.S. Bureau of the Census.

series a net migration rate is calculated and applied to the household population base under age 65. The resultant estimates of net migration are combined with independent estimates of the population 65 years and over, inmates of institutions, college students in dormitories, military personnel living in barracks, and the other components of population change (resident births and deaths, immigration from abroad, and net movement of military barracks personnel to the civilian population) to yield an estimate of total population.

In preparation for the decade following the 2000 Census, the Bureau of the Census is currently discussing ways to improve the estimation process. A post-2000 estimates planning committee has been assembled that includes representatives from the Bureau, the states, and academia. Based on recommendations from this committee, the Bureau is hosting a conference on population estimates methods in early summer 1999. Current plans call for the tax return method and existing processes to continue to be used in 1999 and 2000, but there is a chance the Bureau will change its processes and methods for the following years.

Conclusion

This article has provided a historical and current description of the significant features of population change in Utah. Utah's high birth rates, low death rates, and migration trends have been highlighted, as have the patterns of population change in 1998 among Utah's multi-county districts and counties. To acquaint data users with how population estimates are developed in Utah, UPEC and its methods have been discussed. The population estimates prepared by the Bureau of the Census and the methods it uses have also been described, with a brief comparison of how the Bureau's population estimates differ from those prepared by UPEC. For more information about Utah population data contact the Governor's Office of Planning and Budget.

Notes:

¹For more detail on the characteristics of the people migrating to and from Utah, see Governor's Office of Planning and Budget, *Utah Migration Database: Sources, Methods, Limitations, and Analysis* (Salt Lake City: Utah Governor's Office of Planning and Budget, June 1994).

²Crude refers to the fact that simply dividing births or deaths by the population is a relatively unsophisticated measure of the underlying demographic trends within a given population. Demographers prefer to use what are known as fertility rates when analyzing births and mortality rates when analyzing deaths. For a more detailed discussion of the particular demographic features of Utah's population, see Heaton, Tim B., Chadwick, Bruce A., and Hirschl, Tom A., editors, *Utah in the 1990s: A Demographic Perspective* (Salt Lake City: Signature Books, 1996). The chapter by Pam Perlich, "The Age Structure of Utah's Population," details the impact of Utah's particular age structure on its population growth, and is available on the Internet at <http://www.governor.state.ut.us/dea>. The chapters by Tim B. Heaton, "Birth Capital of the Nation," and Lisa King Hirschl, "Health and Mortality," discuss the particular features of Utah's culture which help explain our high fertility and low mortality rates.

³The U.S. Bureau of the Census defines the urban population as that population living in urbanized areas or in places of 2,500 or more persons outside urbanized areas. Urbanized areas are places with at least 50,000 people and a population density of 1,000. The Census measures the percent of each state's population that is urban during each decennial census. During the first part of this century, Utah was one of the 10 most urbanized states in the nation, though only about half the population was urban. By World War II the share of Utah's population classified as urban increased, and the state ranked in the top 20 rather than the top 10. While the share of Utah's population classified as urban continued to increase in the post-War period, Utah did not rank in the top 10 urban states until 1980, when it ranked eighth. In 1990, with 87 percent of its population urban, Utah ranked as the sixth most urban state in the nation. More details concerning how the Census deals with urban issues may be found on the Internet at <http://www.census.gov/population/www/censusdata/ur-def.html>.

⁴Birth and death rates are often expressed in terms of 1,000 population, but the convention in this article is total births and deaths as a percent of total population.

⁵The U.S. Bureau of the Census defines the Mountain Region to include: Arizona, Colorado, Idaho, Montana, Nevada, New Mexico, Utah, and Wyoming.

⁶More detail on the Bureau of the Census methodology is available in the document "Methodology for Estimates of State and County Total Population," on the Internet at <http://www.census.gov/population/methods/stco.txt>.

<http://www.business.utah.edu/BEBR>

Utah Business Statistics

UTAH DATA	November 1997	November 1998	% Change from Year Ago	12-Month Average This Year	12-Month Average Last Year	12-Month Average % Change
Total Personal Income (seas. adj. at ann. rates, mil. of dol., qtl.)	42,882	44,998	4.9	44,066	41,738	5.6
New Corporations (no.)	1,075	857	(20.3)	759	831	(8.6)
New Car, Truck, and Motor Home Sales (no.)	6,059	5,952	(1.8)	6,956	6,853	1.5
Agriculture						
Average Prices Received by Farmers (dol.)						
Lambs (cwt.)	83.10	59.00	(29.0)	72.83	91.34	(20.3)
Milk, All (cwt.)	14.70	16.90	15.0	14.20	12.38	14.7
Barley (per bushel)	2.61	1.79	(31.4)	2.09	2.51	(16.8)
Alfalfa Hay, Baled (per ton)	107.00	79.00	(26.2)	80.25	86.83	(7.6)
Commercial Red Meat Production (thous. of lbs.)	31,500	381,000	1,109.5	66,658	33,700	97.8
Construction						
Total Permit Construction (thous. of dol.)	248,767.4	249,382.1	0.2	328,336.9	284,731.9	15.3
Residential	147,604.7	140,524.0	(4.8)	182,649.8	158,355.3	15.3
Nonresidential	79,886.4	84,773.1	6.1	108,076.3	93,487.1	15.6
Additions, Alterations, and Repairs	21,276.3	24,085.0	13.2	37,591.2	35,359.5	6.3
New Dwelling Units (no.)	1,776	1,249	(29.7)	1,828	1,691	8.1
Employment						
Civilian Labor Force (thous.)	1,071.5	1,089.5	1.7	1,080.6	1,038.1	4.1
Employed	1,040.7	1,054.8	1.4	1,046.4	1,005.4	4.1
Unemployed	30.8	34.7	12.7	34.2	32.3	6.0
Percent of Labor Force	3.2	3.2	0.0	3.1	3.1	(0.5)
Nonagricultural Jobs (thous.)	1,016.6	1,021.3	0.5	1,021.5	991.0	3.1
Mining	8.4	8.4	0.0	8.2	8.3	(0.4)
Contract Construction	66.8	64.7	(3.1)	67.1	64.3	4.4
Manufacturing	134.9	135.3	0.3	134.9	132.3	2.0
Transportation, Communications, and Utilities	57.0	58.1	1.9	57.9	56.0	3.5
Wholesale Trade	49.7	50.6	1.8	49.8	49.4	0.7
Retail Trade	195.7	198.9	1.6	193.5	188.5	2.7
Finance, Insurance, and Real Estate	53.4	53.7	0.6	53.9	52.3	3.0
Services	274.3	276.0	0.6	278.9	269.1	3.7
Federal Government	30.1	30.4	1.0	31.6	30.9	2.2
State Government	55.3	54.4	(1.6)	55.3	53.6	3.3
Local Government	90.9	90.8	(0.1)	90.2	86.8	3.8
Average Weekly Hours						
Mining	44.0	43.5	(1.1)	43.1	44.3	(2.7)
Manufacturing	41.5	41.0	(1.2)	40.2	40.3	(0.1)
Wholesale Trade	37.6	38.5	2.4	38.7	37.3	3.6
Retail Trade	27.7	28.4	2.5	28.1	28.0	0.5
Amount of Unemployment Compensation (thous. of dol.)	4,996.3	6,761.9	35.3	6,115.2	5,931.6	3.1
Finance (qtl.)						
Total State and National Chartered In-State Banks	33	32	(3.0)	33	34	(3.9)
Total Assets (mil. of dol.)	24,225.4	27,552.0	13.7	25,899.0	23,036.1	12.4
Total Liabilities (mil. of dol.)	22,313.6	25,362.0	13.7	23,709.5	21,226.2	11.7
Total Equity Capital (mil. of dol.)	1,911.8	2,160.0	13.0	2,020.4	1,859.9	8.6
Capital to Assets	8.74	8.70	(0.5)	8.69	8.96	(3.0)
Loan Loss Reserve Ratio	1.38	1.30	(5.8)	1.31	1.43	(8.4)
Loans to Assets	61.74	65.70	6.4	63.25	62.13	1.8
Temporary Investment Ratio	11.66	8.55	(26.7)	11.25	11.61	(3.1)
Return on Assets	1.48	1.23	(16.9)	1.40	0.47	196.5
Production						
Crude Oil (thous. of bbls.)	1,690.0	1,427.3	(15.5)	1,604.8	1,604.9	(0.0)
Natural Gas (mil. of cu. ft.)	23,937.9	25,344.0	5.9	24,701.1	22,639.6	9.1
Coal (thous. short tons)	2,038	1,902	(6.7)	2,093	2,323	(9.9)
Crude Oil to Refineries, Barrels Received (thous. of bbls.)	3,948	4,134	4.7	4,166	3,991	4.4
Travel/Tourism						
Air Passengers (total no. on and off, S.L. Int'l. Airport)	1,502,396	1,479,897	(1.5)	1,680,161	1,722,613	(2.5)
Highway Traffic Count Across State Lines (both directions)	54,312	56,617	4.2	62,921	60,683	3.7
Visits to State and National Parks and Monuments	593,091	574,923	(3.1)	1,361,474	1,395,185	(2.4)
Utilities						
Natural Gas Customers (residential and commercial)	622,265	651,261	3.5	641,717	620,062	3.5
Natural Gas Customers (industrial)	946	1,036	7.9	1,009	891	13.3
Telephone Lines in Service (U.S. West, residential access)	710,863	742,606	3.7	730,166	697,854	4.6
Telephone Lines in Service (U.S. West, business & public access)	332,844	345,155	3.0	338,547	324,364	4.4

Utah Business Statistics

UTAH DATA	November 1997	November 1998	From Year Ago	Average This Year	Average Last Year	Average % Change
Davis County						
Nonagricultural Employment (thous.)	80.3	82.5	2.7	81.8	77.6	5.3
Unemployment Rate (seasonally adjusted)	2.8	3.6	28.6	3.1	3.0	2.2
Authorized Permit Construction (thous. of dol.)	30,324.2	40,231.8	32.7	32,290.9	31,261.8	3.3
New Dwelling Units (no.)	271	170	(37.3)	211	244	(13.5)
New Car, Truck, and Motor Home Sales, Owner's County (no.)	392	584	49.0	582	419	38.8
Natural Gas Customers (residential and commercial)	67,110	70,310	4.8	69,006	65,702	5.0
Natural Gas Customers (industrial)	86	100	16.3	93	84	11.5
Telephone Lines in Service (U.S. West, residential access)	84,393	87,722	3.9	81,554	82,123	(0.7)
Telephone Lines in Service (U.S. West, business access)	24,528	25,766	5.0	25,408	23,603	7.6
Salt Lake County						
Nonagricultural Employment (thous.)	516.9	533.2	3.2	519.3	503.4	3.2
Unemployment Rate (seasonally adjusted)	2.6	3.6	38.5	2.9	2.7	6.1
Authorized Permit Construction (thous. of dol.)	105,473.5	88,597.7	(16.0)	137,960.3	109,237.6	26.3
New Dwelling Units (no.)	438	320	(26.9)	531	478	11.1
New Car, Truck, and Motor Home Sales, Owner's County (no.)	2,309	3,179	37.7	3,208	2,684	19.5
Natural Gas Customers (residential and commercial)	273,473	282,357	3.2	277,100	270,237	2.5
Natural Gas Customers (industrial)	441	477	8.2	461	410	12.5
Telephone Lines in Service (U.S. West, residential access)	327,580	338,480	3.3	326,195	320,688	1.7
Telephone Lines in Service (U.S. West, business access)	188,648	193,400	2.5	191,507	185,109	3.5
Utah County						
Nonagricultural Employment (thous.)	140.1	144.0	2.8	139.1	134.9	3.1
Unemployment Rate (seasonally adjusted)	2.4	3.7	54.2	2.7	2.6	3.8
Authorized Permit Construction (thous. of dol.)	40,201.8	32,469.1	(19.2)	56,439.2	49,705.9	13.5
New Dwelling Units (no.)	325	187	(42.5)	343	262	30.9
New Car, Truck, and Motor Home Sales, Owner's County (no.)	466	703	50.9	672	535	25.4
Natural Gas Customers (residential and commercial)	87,813	91,969	4.7	90,283	86,631	4.2
Natural Gas Customers (industrial)	124	140	12.9	135	119	13.8
Telephone Lines in Service (U.S. West, residential access)	100,892	105,105	4.2	102,842	96,760	6.3
Telephone Lines in Service (U.S. West, business access)	43,386	44,224	1.9	43,550	41,514	4.9
Weber County						
Nonagricultural Employment (thous.)	86.8	86.9	0.1	88.4	86.3	2.4
Unemployment Rate (seasonally adjusted)	3.8	4.6	21.1	4.2	3.9	7.9
Authorized Permit Construction (thous. of dol.)	17,771.5	20,413.9	14.9	23,053.6	22,580.6	2.1
New Dwelling Units (no.)	187	110	(41.2)	145	161	(9.7)
New Car, Truck, and Motor Home Sales, Owner's County (no.)	378	377	(0.3)	438	355	23.2
Natural Gas Customers (residential and commercial)	61,614	63,720	3.4	62,934	60,723	3.6
Natural Gas Customers (industrial)	96	107	11.5	105	91	15.3
Telephone Lines in Service (U.S. West, residential access)	61,057	62,491	2.3	61,830	60,133	2.8
Telephone Lines in Service (U.S. West, business access)	22,531	22,584	0.2	22,282	21,912	1.7

NA Not Available

¹ Before deductions for hauling and government withholding, but includes quality, quantity and other premiums. Excludes hauling subsidies

² Mid-month prices.

³ Some figures are not strictly comparable due to reclassification.

⁴ Includes services by nonprofit and religious organizations.

⁵ Includes public schools and college institutions.

⁶ Includes allowance for loan losses.

Sources:

Personal Income
New Corporations
New Car and Truck Sales
Agriculture
Construction Data
Employment Data
Finance Data
Crude Oil Production

Natural Gas Production
Coal Production
Air Passengers
Highway Traffic Count
Visits to State and National Parks and Monuments
Utilities Data

U.S. Department of Commerce, Bureau of Economic Analysis.
Utah Department of Commerce, Division of Corporations and Commercial Code.
Utah State Tax Commission, Economic and Statistics Unit, *Utah Cars and Trucks Sales*.
U.S. Department of Agriculture, Utah Agricultural Statistics Service, *Utah Agriculture*.
Bureau of Economic and Business Research, University of Utah, *Utah Construction Report*.
Utah Department of Employment Security, *Utah Labor Market Report*.
Utah Department of Financial Institutions.
Utah Division of Oil, Gas and Mining, *Oil and Gas Production Report*, and
Utah Office of Energy and Resource Planning.
Utah Division of Oil, Gas and Mining, *Oil and Gas Production Report*.
U.S. Department of Energy, Energy Information Administration.
SLC International Airport, Statistics Division, *Air Traffic Statistics and Activity Report*.
Utah Department of Transportation, *Automatic Traffic Recorder Data Report*.
U.S. Forest Service and Utah State Parks and Recreation Department.
Cooperating Utility Companies.

NATIONAL DATA	November 1997	November 1998	% Change from Year Ago	12-Month Average This Year	12-Month Average Last Year	12-Month Average % Change
U.S. Gross Domestic Product (seas. adj. at ann. rates, bil., qtl.)	8,254.5	8,672.8	5.1	8,481.2	8,099.8	4.7
Total Personal Income (seas. adj. at ann. rates, bil. of dol.)	6,904.9	7,276.6	5.4	7,091.5	6,802.5	4.2
Industrial Production Index (seasonally adjusted, 1992=100)	127.5	136.4	7.0	131.0	121.7	7.6
Capacity Utilization Rate (seasonally adjusted, percent)	83.3	80.1	(3.8)	81.4	83.1	(2.0)
Net Exports of Goods & Services (millions of dollars; seasonally adj.)	(9,600.0)	(15,257.0)	58.9	(13,508.4)	(9,241.7)	46.2
Exports of Goods & Services (millions of dollars; seasonally adj.)	79,088.0	78,958.0	(0.2)	77,788.4	77,438.3	0.5
Imports of Goods & Services (millions of dollars; seasonally adj.)	88,688.0	94,215.0	6.2	91,296.8	86,679.9	5.3
Composite Index of 11 Leading Indicators (1992=100)	104.5	106.2	1.6	105.3	103.7	1.5
Price Indexes						
Consumer Price Indexes (not seasonally adjusted, 1982-84=100)						
CPI-U (All Urban Consumers) All Items	161.5	164.0	1.5	162.8	160.3	1.6
CPI-U (All Urban Consumers) Food and Beverages	158.9	162.5	2.3	161.0	157.5	2.3
CPI-U (All Urban Consumers) Housing	157.7	161.3	2.3	159.6	156.5	2.0
CPI-U (All Urban Consumers) Transportation	143.9	141.5	(1.7)	141.8	144.4	(1.8)
CPI-U (All Urban Consumers) Medical Care	236.4	244.7	3.5	241.1	234.0	3.0
CPI-U (All Urban Consumers) Energy	100.5	110.7	10.1	104.3	111.3	(6.3)
Producer Price Index (not seasonally adjusted, 1982=100)						
Producer Price Index, All Finished Goods	131.7	130.8	(0.7)	129.6	131.2	(1.2)
GDP Implicit Price Deflator (seasonally adjusted, 1992=100, qtl.)	113.0	113.0	0.0	112.7	112.2	0.4
Corporate Profits (seas. adj. at ann. rates, bil., qtl.)						
Profits Before Taxes	736.4	720.5	(2.2)	720.6	728.3	(1.1)
Profits-Tax Liability	249.3	243.2	(2.4)	242.2	245.0	(1.1)
Profits After Taxes	487.1	477.3	(2.0)	478.4	483.2	(1.0)
Civilian Employment (seasonally adjusted)						
Labor Force (mil.)	136.8	138.2	1.0	137.5	136.1	1.0
Employment (mil.)	133.6	132.1	(1.1)	131.3	129.6	1.3
Unemployment Rate	4.6	4.4	(4.3)	4.5	5.0	(9.8)
Value of New Construction Put In Place						
Total Construction (seas. adj. at ann. rates, bil. of dol.)	611.3	671.4	9.8	647.9	599.7	8.0
Private Const.: Residential (seas. adj. at ann. rates, bil. of dol.) ^a	268.1	526.1	96.2	451.7	258.7	74.6
New Housing Units (seas. adj. at ann. rates, bil. of dol.)	190.1	222.9	17.3	208.5	183.9	13.4
Private Const.: Nonresidential (seas. adj. at ann. rates, bil. of dol.)	159.8	176.2	10.3	168.5	159.5	5.6
Interest Rates						
Federal Funds Rate	5.52	4.83	(12.5)	5.42	5.44	(0.4)
Discount Rate on New 91-Day Treasury Bills	5.15	4.44	(13.8)	4.88	5.05	(3.3)
Yield on Long-Term Treasury Bonds	6.18	5.43	(12.1)	5.75	6.72	(14.3)
Average Prime Rate Charged by Banks	8.50	7.89	(7.2)	8.42	8.42	(0.0)
Mortgage Rate (conventional 1st mortgage, new home, U.S. avg.)	7.26	6.68	(8.0)	6.99	7.60	(8.0)

NA Not Available

^a Includes residential improvements, not shown separately.

Sources:

U.S. Gross Domestic Product	U.S. Department of Commerce, <i>Survey of Current Business</i> .
Total Personal Income	U.S. Department of Commerce, <i>Survey of Current Business</i> .
Industrial Production Index	Board of Governors of the Federal Reserve Systems, <i>Federal Reserve Bulletin</i> .
Capacity Utilization Rate	Board of Governors of the Federal Reserve Systems, <i>Federal Reserve Bulletin</i> .
Export/Import Data	U.S. Department of Commerce, <i>Survey of Current Business</i> .
Composite Index of 11 Leading Indicators	The Conference Board, Inc.
Consumer Price Indexes	U.S. Department of Labor, Bureau of Labor Statistics, <i>Monthly Labor Review</i> .
Producer Price Index	U.S. Department of Labor, Bureau of Labor Statistics, <i>Monthly Labor Review</i> .
GDP Implicit Price Deflator	U.S. Department of Commerce, <i>Survey of Current Business</i> .
Corporate Profits	U.S. Department of Commerce, <i>Survey of Current Business</i> .
National Employment Data	U.S. Department of Labor, Bureau of Labor Statistics, <i>Monthly Labor Review</i> .
National Construction Data	U.S. Department of Commerce, Bureau of the Census, <i>Value of New Construction Put in Place</i> .
Interest Rates	Board of Governors of the Federal Reserve Systems, <i>Federal Reserve Bulletin</i> .

Utah Business Statistics

UTAH DATA	December 1997	December 1998	% Change from Year Ago	12-Month Average This Year	12-Month Average Last Year	12-Month Average % Change
Total Personal Income (seas. adj. at ann. rates, mil. of dol., qtl.)	42,882	44,998	4.9	44,242	41,973	5.4
New Corporations (no.)	657	783	19.2	770	825	(6.7)
New Car, Truck, and Motor Home Sales (no.)	5,995	6,584	9.8	7,005	6,863	2.1
Agriculture						
Average Prices Received by Farmers (dol.)						
Lambs (cwt.)	83.00	60.00	(27.7)	70.92	90.84	(21.9)
Milk, All (cwt.) ¹	13.90	18.10	30.2	14.55	12.46	16.8
Barley (per bushel)	2.38	2.02	(15.1)	2.06	2.51	(18.0)
Alfalfa Hay, Baled (per ton) ⁴	85.00	85.00	0.0	80.25	86.75	(7.5)
Commercial Red Meat Production (thous. of lbs.)	34,600	37,036	7.0	66,861	33,975	96.8
Construction						
Total Permit Construction (thous. of dol.)	477,924.6	336,520.1	(29.6)	316,553.2	310,134.9	2.1
Residential	149,099.5	145,971.9	(2.1)	182,389.2	161,929.4	12.6
Nonresidential	299,557.5	151,049.3	(49.6)	95,700.6	114,246.5	(16.2)
Additions, Alterations, and Repairs	29,267.6	39,498.9	35.0	38,443.9	36,429.0	5.5
New Dwelling Units (no.)	1,584	1,393	(12.1)	1,812	1,724	5.1
Employment ²						
Civilian Labor Force (thous.)	1,071.4	1,090.0	1.7	1,082.1	1,042.9	3.8
Employed	1,045.2	1,060.1	1.4	1,047.6	1,010.5	3.7
Unemployed	26.2	29.9	14.1	34.5	32.0	7.9
Percent of Labor Force	2.4	2.7	12.5	3.2	3.1	1.6
Nonagricultural Jobs (thous.)	1,022.0	1,048.7	2.6	1,023.7	994.0	3.0
Mining	8.4	7.7	(8.3)	8.2	8.3	(1.4)
Contract Construction	64.7	70.0	8.2	67.6	64.6	4.6
Manufacturing	134.9	134.8	(0.1)	134.9	132.6	1.7
Transportation, Communications, and Utilities	57.8	60.4	4.5	58.1	56.1	3.6
Wholesale Trade	50.0	50.7	1.4	49.8	49.4	0.8
Retail Trade	199.2	200.4	0.6	193.6	189.1	2.4
Finance, Insurance, and Real Estate	53.8	56.7	5.4	54.1	52.5	3.2
Services ⁴	277.6	286.9	3.4	279.7	270.1	3.6
Federal Government	30.3	30.0	(1.0)	31.5	30.9	1.9
State Government ²	54.4	57.9	6.4	55.6	53.7	3.6
Local Government ²	90.8	93.2	2.6	90.4	87.1	3.7
Average Weekly Hours						
Mining	42.8	41.9	(2.1)	43.0	44.3	(2.9)
Manufacturing	40.8	42.7	4.7	40.4	40.3	0.2
Wholesale Trade	36.1	38.9	7.8	38.9	37.2	4.6
Retail Trade	28.1	28.6	1.8	28.2	28.0	0.8
Amount of Unemployment Compensation (thous. of dol.)	6,563.1	7,564.0	15.3	6,198.6	5,881.3	5.4
Finance (qtl.)						
Total State and National Chartered In-State Banks	33	32	(3.0)	33	34	(3.7)
Total Assets (mil. of dol.)	24,225.4	27,522.0	13.6	26,173.7	23,178.4	12.9
Total Liabilities (mil. of dol.)	22,313.6	25,362.0	13.7	23,963.5	21,361.7	12.2
Total Equity Capital (mil. of dol.)	1,911.8	2,160.0	13.0	2,041.1	1,866.6	9.3
Capital to Assets ⁵	8.74	8.70	(0.5)	8.69	8.94	(2.8)
Loan Loss Reserve Ratio	1.38	1.30	(5.8)	1.30	1.42	(8.5)
Loans to Assets	61.74	65.70	6.4	63.58	62.01	2.5
Temporary Investment Ratio	11.66	8.55	(26.7)	10.99	11.67	(5.8)
Return on Assets	1.48	1.23	(16.9)	1.38	0.57	143.4
Production						
Crude Oil (thous. of bbls.)	1,699.5	1,421.0	(16.4)	1,581.6	1,611.4	(1.9)
Natural Gas (mil. of cu. ft.)	24,102.9	24,948.7	3.5	24,771.6	22,736.6	9.0
Coal (thous. short tons)	2,528	2,505	(0.9)	2,091	2,367	(11.7)
Crude Oil to Refineries, Barrels Received (thous. of bbls.)	3,978	4,036	1.5	4,171	3,996	4.4
Travel/Tourism						
Air Passengers (total no. on and off, S.L. Int'l. Airport)	1,703,090	1,661,723	(2.4)	1,676,714	1,714,672	(2.2)
Highway Traffic Count Across State Lines (both directions)	49,541	52,727	6.4	63,186	60,893	3.8
Visits to State and National Parks and Monuments	378,064	379,501	0.4	1,361,594	1,390,608	(2.1)
Utilities						
Natural Gas Customers (residential and commercial)	632,518	655,605	3.7	643,641	622,015	3.5
Natural Gas Customers (industrial)	964	1,028	6.6	1,015	904	12.2
Telephone Lines in Service (U.S. West, residential access)	719,210	746,647	3.8	732,453	701,022	4.5
Telephone Lines in Service (U.S. West, business & public access)	336,056	345,799	2.9	339,359	326,090	4.1

Utah Business Statistics

UTAH DATA	December 1997	December 1998	% Change from Year Ago	12-Month Average This Year	12-Month Average Last Year	12-Month Average % Change
Davis County						
Nonagricultural Employment (thous.)	79.7	81.8	2.6	82.0	78.0	5.0
Unemployment Rate (seasonally adjusted)	2.8	3.8	35.7	3.2	3.0	6.1
Authorized Permit Construction (thous. of dol.)	37,541.3	25,072.7	(33.2)	31,251.8	33,180.8	(5.8)
New Dwelling Units (no.)	387	221	(42.9)	197	267	(26.2)
New Car, Truck, and Motor Home Sales, Owner's County (no.)	411	630	53.3	600	426	41.0
Natural Gas Customers (residential and commercial)	67,723	70,759	4.5	69,259	65,974	5.0
Natural Gas Customers (industrial)	87	99	13.8	94	84	11.7
Telephone Lines in Service (U.S. West, residential access)	84,903	89,050	4.9	81,900	82,531	(0.8)
Telephone Lines in Service (U.S. West, business access)	24,717	26,160	5.8	25,529	23,762	7.4
Salt Lake County						
Nonagricultural Employment (thous.)	520.9	535.9	2.9	520.5	504.9	3.1
Unemployment Rate (seasonally adjusted)	2.6	3.6	38.5	3.0	2.7	9.9
Authorized Permit Construction (thous. of dol.)	300,184.3	113,288.6	(62.3)	122,385.7	129,130.6	(5.2)
New Dwelling Units (no.)	338	387	14.5	535	478	11.9
New Car, Truck, and Motor Home Sales, Owner's County (no.)	2,220	2,489	12.1	3,231	2,687	20.2
Natural Gas Customers (residential and commercial)	273,641	283,415	3.6	277,915	270,807	2.6
Natural Gas Customers (industrial)	443	470	6.1	464	417	11.2
Telephone Lines in Service (U.S. West, residential access)	328,915	339,416	3.2	327,070	321,975	1.6
Telephone Lines in Service (U.S. West, business access)	189,502	193,459	2.1	191,837	185,906	3.2
Utah County						
Nonagricultural Employment (thous.)	139.9	143.7	2.7	139.4	135.2	3.1
Unemployment Rate (seasonally adjusted)	2.4	3.6	50.0	2.8	2.6	9.0
Authorized Permit Construction (thous. of dol.)	51,073.5	31,655.9	(38.0)	54,821.1	51,643.5	6.2
New Dwelling Units (no.)	152	184	21.1	346	256	35.2
New Car, Truck, and Motor Home Sales, Owner's County (no.)	438	733	67.4	696	535	30.0
Natural Gas Customers (residential and commercial)	88,592	92,885	4.8	90,641	86,915	4.3
Natural Gas Customers (industrial)	126	139	10.3	136	120	13.6
Telephone Lines in Service (U.S. West, residential access)	101,230	105,704	4.4	103,214	97,277	6.1
Telephone Lines in Service (U.S. West, business access)	43,124	44,189	2.5	43,638	41,782	4.4
Weber County						
Nonagricultural Employment (thous.)	87.1	87,265.0	100,089.4	7,353.2	86.5	8,401.6
Unemployment Rate (seasonally adjusted)	3.7	4.5	21.6	4.3	3.9	10.8
Authorized Permit Construction (thous. of dol.)	19,190.1	35,232.4	83.6	24,390.4	22,283.6	9.5
New Dwelling Units (no.)	106	98	(7.5)	145	159	(9.0)
New Car, Truck, and Motor Home Sales, Owner's County (no.)	355	441	24.2	445	362	22.7
Natural Gas Customers (residential and commercial)	62,189	64,197	3.2	63,102	60,924	3.6
Natural Gas Customers (industrial)	98	105	7.1	106	92	14.6
Telephone Lines in Service (U.S. West, residential access)	61,250	65,709	7.3	62,201	60,316	3.1
Telephone Lines in Service (U.S. West, business access)	22,419	22,528	0.5	22,291	22,032	1.2

¹ Before deductions for hauling and government withholding, but includes quality, quantity and other premiums. Excludes hauling subsidies

² Mid-month prices.

³ Some figures are not strictly comparable due to reclassification.

⁴ Includes services by nonprofit and religious organizations.

⁵ Includes public schools and college institutions.

⁶ Includes allowance for loan losses.

Sources:	
Personal Income	U.S. Department of Commerce, Bureau of Economic Analysis.
New Corporations	Utah Department of Commerce, Division of Corporations and Commercial Code.
New Car and Truck Sales	Utah State Tax Commission, Economic and Statistics Unit, Utah Car and Truck Sales.
Agriculture	U.S. Department of Agriculture, Utah Agricultural Statistics Service, Utah Agriculture.
Construction Data	Bureau of Economic and Business Research, University of Utah, Utah Construction Report.
Employment Data	Utah Department of Employment Security, Utah Labor Market Report.
Finance Data	Utah Department of Financial Institutions.
Crude Oil Production	Utah Division of Oil, Gas and Mining, Oil and Gas Production Report, and Utah Office of Energy and Resource Planning.
Natural Gas Production	Utah Division of Oil, Gas and Mining, Oil and Gas Production Report.
Coal Production	U.S. Department of Energy, Energy Information Administration.
Air Passengers	SLC International Airport, Statistics Division, Air Traffic Statistics and Activity Report.
Highway Traffic Count	Utah Department of Transportation, Automatic Traffic Recorder Data Report.
Visits to State and National Parks and Monuments	U.S. Forest Service and Utah State Parks and Recreation Department.
Utilities Data	Cooperating Utility Companies.

NATIONAL DATA	December 1997	December 1998	% Change from Year Ago	12-Month Average This Year	12-Month Average Last Year	12-Month Average % Change
U.S. Gross Domestic Product (seas. adj. at ann. rates, bil., qtlly.)	8,254.5	8,672.8	5.1	8,516.1	8,138.3	4.6
Total Personal Income (seas. adj. at ann. rates, bil. of dol.)	6,904.9	7,271.6	5.3	7,122.1	6,826.4	4.3
Industrial Production Index (seasonally adjusted, 1992=100)	127.9	136.6	6.8	131.7	122.5	7.5
Capacity Utilization Rate (seasonally adjusted, percent)	83.3	79.9	(4.1)	81.2	83.1	(2.3)
Net Exports of Goods & Services (millions of dollars; seasonally adj.)	(10,205.0)	(13,786.0)	35.1	(13,806.8)	(9,258.4)	49.1
Exports of Goods & Services (millions of dollars; seasonally adj.)	79,784.0	78,496.0	(1.6)	77,681.1	78,016.8	(0.4)
Imports of Goods & Services (millions of dollars; seasonally adj.)	89,989.0	92,282.0	2.5	91,487.9	87,275.2	4.8
Composite Index of 11 Leading Indicators (1992=100)	104.5	106.4	1.8	105.5	103.9	1.5
Price Indexes						
Consumer Price Indexes (not seasonally adjusted, 1982-84=100)						
CPI-U (All Urban Consumers) All Items	161.3	163.9	1.6	163.0	160.5	1.6
CPI-U (All Urban Consumers) Food and Beverages	159.1	162.7	2.3	161.3	157.7	2.3
CPI-U (All Urban Consumers) Housing	157.7	161.3	2.3	159.9	156.8	2.0
CPI-U (All Urban Consumers) Transportation	143.2	140.7	(1.7)	141.5	144.2	(1.9)
CPI-U (All Urban Consumers) Medical Care	237.1	245.2	3.4	241.8	234.5	3.1
CPI-U (All Urban Consumers) Energy	108.4	98.9	(8.8)	103.5	111.0	(6.8)
Producer Price Index (not seasonally adjusted, 1982=100)						
Producer Price Index, All Finished Goods	131.1	131.0	(0.1)	129.6	131.1	(1.1)
GDP Implicit Price Deflator (seasonally adjusted, 1992=100, qtlly.)	113.0	113.0	0.0	112.7	112.4	0.3
Corporate Profits (seas. adj. at ann. rates, bil., qtlly.)						
Profits Before Taxes	736.4	720.5	(2.2)	719.3	733.0	(1.9)
Profits-Tax Liability	249.3	243.2	(2.4)	241.7	247.0	(2.1)
Profits After Taxes	487.1	477.3	(2.0)	477.6	485.9	(1.7)
Civilian Employment (seasonally adjusted)						
Labor Force (mil.)	137.2	138.5	0.9	137.7	136.3	1.0
Employment (mil.)	130.8	132.5	1.3	131.5	129.8	1.3
Unemployment Rate	4.7	4.3	(8.5)	4.5	5.0	(9.6)
Value of New Construction Put In Place						
Total Construction (seas. adj. at ann. rates, bil. of dol.)	611.8	681.1	11.3	653.6	601.7	8.6
Private Const.: Residential (seas. adj. at ann. rates, bil. of dol.) ^b	271.9	533.1	96.1	473.4	260.5	81.8
New Housing Units (seas. adj. at ann. rates, bil. of dol.)	193.5	228.2	17.9	211.4	185.3	14.1
Private Const.: Nonresidential (seas. adj. at ann. rates, bil. of dol.)	159.1	179.9	13.1	170.2	160.2	6.2
Interest Rates						
Federal Funds Rate	5.50	4.95	(10.0)	5.38	5.46	(1.5)
Discount Rate on New 91-Day Treasury Bills	5.16	4.07	(21.1)	4.79	5.07	(5.5)
Yield on Long-Term Treasury Bonds	6.06	5.29	(12.7)	5.69	6.67	(14.7)
Average Prime Rate Charged by Banks	8.50	7.75	(8.8)	8.35	8.44	(1.0)
Mortgage Rate (conventional 1st mortgage, new home, U.S. avg.)	7.25	6.66	(8.1)	6.95	7.57	(8.3)

NA Not Available

^b Includes residential improvements, not shown separately.

Sources:

U.S. Gross Domestic Product	U.S. Department of Commerce, <i>Survey of Current Business</i> .
Total Personal Income	U.S. Department of Commerce, <i>Survey of Current Business</i> .
Industrial Production Index	Board of Governors of the Federal Reserve Systems, <i>Federal Reserve Bulletin</i> .
Capacity Utilization Rate	Board of Governors of the Federal Reserve Systems, <i>Federal Reserve Bulletin</i> .
Export/Import Data	U.S. Department of Commerce, <i>Survey of Current Business</i> .
Composite Index of 11 Leading Indicators	The Conference Board, Inc.
Consumer Price Indices	U.S. Department of Labor, Bureau of Labor Statistics, <i>Monthly Labor Review</i> .
Producer Price Index	U.S. Department of Labor, Bureau of Labor Statistics, <i>Monthly Labor Review</i> .
GDP Implicit Price Deflator	U.S. Department of Commerce, <i>Survey of Current Business</i> .
Corporate Profits	U.S. Department of Commerce, <i>Survey of Current Business</i> .
National Employment Data	U.S. Department of Labor, Bureau of Labor Statistics, <i>Monthly Labor Review</i> .
National Construction Data	U.S. Department of Commerce, Bureau of the Census, <i>Value of New Construction Put in Place</i> .
Interest Rates	Board of Governors of the Federal Reserve Systems, <i>Federal Reserve Bulletin</i> .

Bureau of Economic and
Business Research
University of Utah
1645 E Campus Center Dr Rm 401
Salt Lake City UT 84112-9302
Return Postage Guaranteed
(Nonprofit Organization)

Nonprofit Org.
U.S. Postage Paid
Permit No. 1529
Salt Lake City, UT

UTAH POPULATION ESTIMATES COMMITTEE

Natalie Gochnour, Chair
T. Ross Reeve
Brad Barber
Jim Robson
Barry Nangle
Ron Durtschi
Frank Hachman
Mike Toney
Ken Jensen
Tom Williams
Walter Busse
Courtney White
Patty Bowles

Governor's Office of Planning and Budget
Governor's Office of Planning and Budget
Governor's Office of Planning and Budget
Utah Foundation
Utah Department of Health
Questar Gas
University of Utah
Utah State University
Utah Department of Workforce Services
Utah State Tax Commission
Church of Jesus Christ of Latter-day Saints
Utah State Board of Regents
Utah State Office of Education

UTAH ECONOMIC AND BUSINESS REVIEW

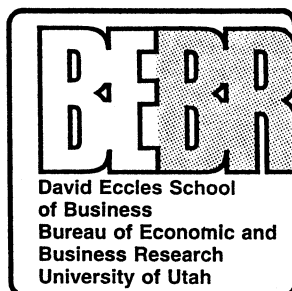
VOLUME 59 NOS. 1 & 2



J. Bernard Machen
President

David Eccles School of Business
Debra L. Scammon *Interim Dean*

Bureau of Economic and Business Research
R. Thayne Robson *Director*
Frank C. Hachman *Associate Director*



Research Staff

James A. Wood
Jan E. Crispin
Brian J. Dean
Alan E. Isaacson
Trang T.Q. Le

Senior Research Analyst
Senior Research Analyst
Research Assistant
Research Assistant
Research Assistant

Office Staff

Cathy Crawford
James B. Peters
Diane S. Gillam

Administrative Assistant
Production
Accountant/Editor